DOCUMENT RESUME

ED 064 522 VT 016 149

AUTHOR	Pucel, David J.; And Others
TITLE	Minnesota Vocational Interest Inventory. Training Success Norms and Employment Success Norms. Project MINI-SCORE, Final Technical Report.
INSTITUTION	Minnesota Univ., Minneapolis. Dept. of Trade and Industrial Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D. C. Div. of Comprehensive and Vocational Research.
REPORT NO	R-4
PUB DATE	Mar 72
NOTE	70p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Group Norms; *Interest Tests; Occupational Clusters; *Predictive Ability (Testing); Profile Evaluation; Prognostic Tests; Standardized Tests; Success Factors; Tables (Data); Technical Education; Vocational Adjustment; *Vocational Counseling; Vocational Education
IDENTIFIERS	Minnesota Vocational Interest Inventory; MVII; Project MINI SCORE

ABSTRACT

Presented in this document are data on the interest patterns of post-secondary vocational education students as collected by means of the Minnesota Vocational Interest Inventory (MVII). Assuming that workers in a given occupation possess certain likes and dislikes in common which differ from those of workers in other occupations, this interest inventory accomplishes for nonprofessional groups what the Strong and the Kuder do for professional groups. Included are charts portraying: (1) MVII Homogeneous Key Training Success Norm Profiles, (2) MVII Homogeneous Key Employment Success Norm Profiles, (3) Raw Score Homogeneous Key Means, Standard Deviations and Number of Observations for Groups Used in Preparing Training Success Norms, (4) Raw Score Homogeneous Key Means, Standard Deviations and Number of Observations for Groups Used in Preparing Employment Success Norms, and (5) MVII - Homogeneous Key Student Profile Sheet. (JS)

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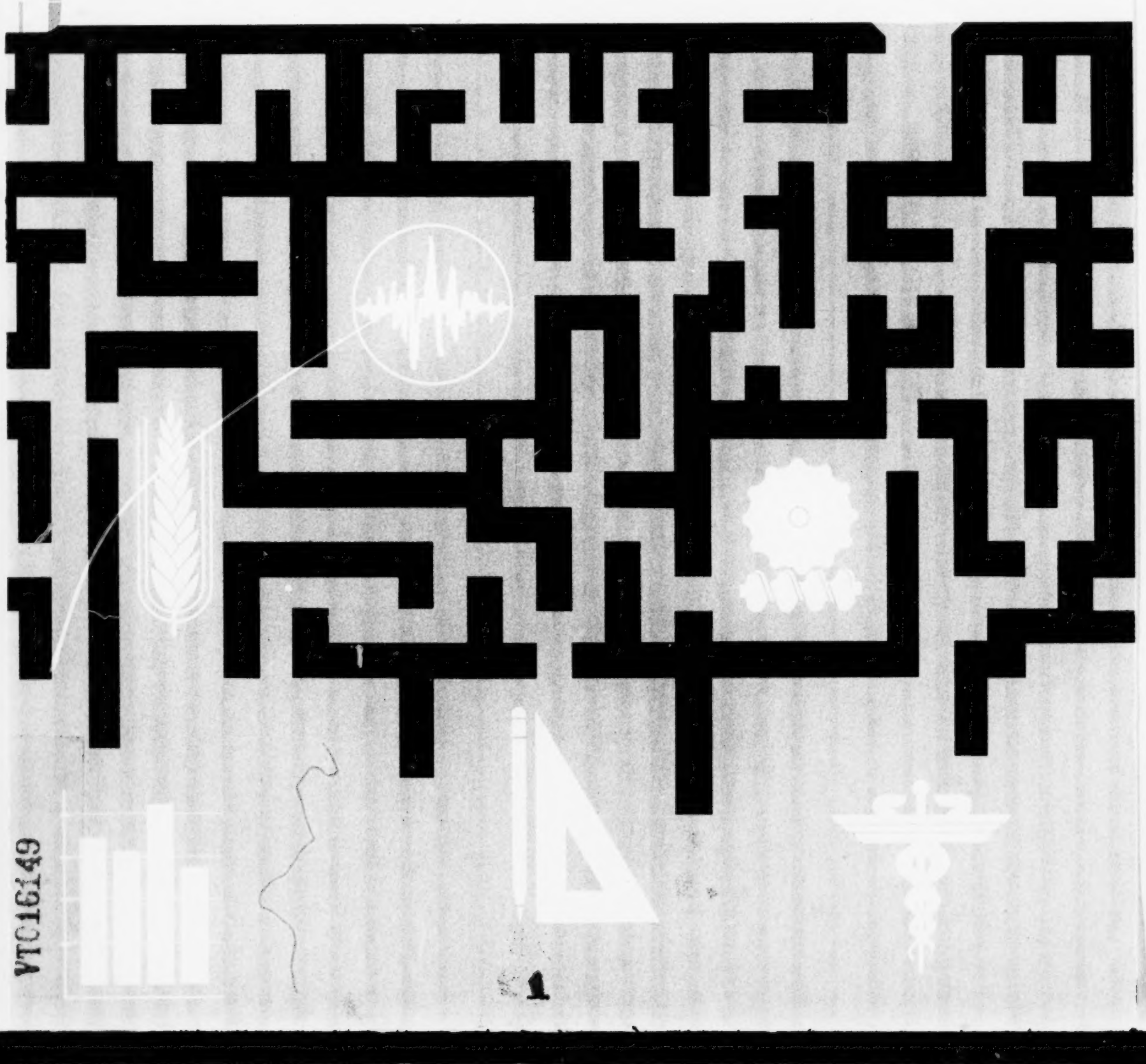
PROJECT MINI-SCORE
FINAL TECHNICAL REPORT

MINNESOTA VOCATIONAL INTEREST INVENTORY
Training Success Norms and Employment Success Norms



VT016149

PROJECT MINI-SCORE FINAL TECHNICAL REPORT:

MINNESOTA VOCATIONAL INTEREST INVENTORY TRAINING SUCCESS NORMS AND EMPLOYMENT SUCCESS NORMS

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The research reported herein was performed pursuant to a grant with the Division of Comprehensive and Vocational Research, Office of Education, U. S. Department of Health, Education, and Welfare. The formal project name is "The Characteristics of Full-Time Students in Post-Secondary Trade Schools," U.S.O.E. project No. HRD 5-0148. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Project MINI-SCORE
(Minnesota Student Characteristics and
Occupationally Related Education)
Department of Industrial Education
University of Minnesota
March, 1972

FOREWORD

This technical report is one of the technical reports of Project MINI-SCORE which summarize the findings of six years of intensive research into possible relationships between standardized test measures and a number of different criteria of vocational student success. The technical reports present a detailed discussion of Project findings. A general discussion of the goals and objectives of the total Project and the major findings can be found in the publication entitled PROJECT MINI-SCORE FINAL REPORT.

Through Project MINI-SCORE, test data consisting of measures derived from six separate instruments and test batteries were gathered on individual applicants to the area vocational-technical schools of Minnesota. The tests included in the battery were: (1) the General Aptitude Test Battery (Form B) written portions only, (2) the Minnesota Vocational Interest Inventory, (3) the Sixteen Personality Factor Questionnaire (Form C), (4) the Minnesota Importance Questionnaire (30-scale version), (5) the Vocational Development Inventory, and (6) the Minnesota Scholastic Aptitude Test. In addition, personal descriptive data were obtained from the students through the use of a questionnaire. The data from these instruments were analyzed to determine which of the information gathered would be useful in counseling individuals with reference to full-time, post-high school vocational-technical courses offered in the area vocational-technical schools of Minnesota. Measures of vocational student success included in the Project were: (1) reported graduation versus dropping out of programs, (2) employment status one year after graduation, (3) job satisfaction one year after graduation, and (4) job satisfactoriness one year after graduation.

The titles of all of the final technical reports of the Project can be found on the back cover of this report. Additional publications of Project MINI-SCORE which have dealt with some of the critical issues in vocational education research are listed on the last page. Limited numbers of copies of these reports are available.

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THE MINNESOTA VOCATIONAL INTEREST INVENTORY[1]
(DEVELOPMENT AND PRIOR USAGE)

Development

The research which forms the foundation for the Minnesota Vocational Interest Inventory (MVII) had its beginning during World War II in the development of a vocational interest inventory which could assist Navy counselors in the assignment and placement of Navy enlisted personnel. After the War, the findings of this research were applied to the study of a wide sampling of civilian nonprofessional occupations.

The MVII is an inventory which provides systematic information on the interest patterns of men and women in nonprofessional occupations. However, most of the work in the past has been done with men. It is composed of 158 triads of brief statements describing the tasks or activities involved in a number of different occupations. Examinees indicate their preferences for the tasks in each triad by choosing the one activity most liked and the one activity most disliked. For each person who completes the inventory, scores are derived to provide an index of similarity between his or her interests and the interests of persons in a variety of nonprofessional occupations.

The MVII authors believe that, for general purposes, the inventory would be suitable for students in the ninth grade or higher, or for persons who are at least fifteen years of age. However, they indicate caution should be observed when interpreting the scores of fifteen or sixteen-year-olds as occupational interest levels have not fully crystallized for this age group.

The MVII assumes that workers in a given occupation possess certain likes and dislikes in common and that these differ from those of workers in other occupations. The MVII accomplishes for the nonprofessional occupations what the Strong and the Kuder do for professional groups. Currently, MVII data are available on the interest patterns of over seven thousand civilian workers distributed among more than twenty civilian occupations. The validity of the occupational scoring keys is based on the fact that they are "empirical" keys that have been developed through scoring responses that differentiate men in an occupation from a group of tradesmen in general. Validity indices are not reported for the homogeneous keys as these keys were not used in the past to separate groups but were an attempt to draw together items with a common core into scales that can be used to understand the nature of the differences between groups.

The extent to which an individual's interest pattern matches that of a given group is determined by applying a key to the interest inventory. Each key was developed by comparing the item responses made by a specific occupational group with those made by a group of tradesmen-in-general. The key represents a profile that provides a method of evaluating an individual's interests against the interest profile of an occupational group.

---

[1]Kenneth E. Clark and David P. Campbell, Minnesota Vocational Interest Inventory (New York, The Psychological Corporation, 1965).

Inventory Keys

Two sets of keys, occupational and homogeneous, have been developed for interpreting inventory results. The occupational keys provide a means of comparing an individual's interests with those of persons employed in specific occupations. Each of the twenty-one keys bears the name of the occupational group which served as the basis for its development. These keys are:

Baker
Food Service
Milk Wagon Driver
Retail Sales Clerk
Stock Clerk
Printer
Tabulating Machine Operator
Warehouseman
Hospital Attendant
Pressman
Carpenter
Painter
Plasterer
Truck Driver
Truck Mechanic
Industrial Education Teacher
Sheet Metal Worker
Plumber
Machinist
Electrician
Radio-TV Repairman

Nine homogeneous keys were derived by identifying clusters of inventory items that correlated highly with each other using the tradesmen-in-general group. These clusters could be viewed as nine factors underlying interest as measured by the MVII. These clusters were named by inspecting the items which formed each cluster. The homogeneous keys and their descriptions are as follows:

H-1: Mechanical

Indicates interests in mechanical things, machine operation and design, or about home repairs of mechanical and simple electrical gadgets.

H-2: Health Service

Expresses interests in medical and hospital services, activities and occupations, or in working in medical, biological or chemical laboratories.

H-3: Office Work

Indicates interests in general clerical work and office machine operation, bookkeeping and accounting, and office management practices.

H-4: Electronics

This key expresses an interest in the maintenance, operation and construction of electronic equipment, and the repair and construction of electrical systems and devices.

H-5: Food Service

Indicates interests in the preparation of food and menu planning.

H-6: Carpentry

This cluster deals primarily with interests relating to carpentry, cabinet making and furniture construction.

H-7: Sales-Office

Two clusters of interests are indicated here. The larger deals with a variety of verbal activities, while the other relates to aesthetic interests.

H-8: Clean Hands

Indicates an interest in those occupations which possess "clean hands" kinds of activities.

H-9: Outdoors

This key reflects an interest in athletics and other outdoor activities.

Standard Reporting of Scores

The scores on the MVII are relatively independent of intelligence or abilities as measured by aptitude tests. The scores summarize the individual's preferences for work; they do not indicate those areas in which he has the greatest skill or the greatest possibility of attaining competence.

Scores on all keys are reported as standard scores based on the appropriate occupational group for each "Occupational Key" and on the tradesmen-in-general group for the "Homogeneous Keys".

To facilitate the interpretation of the scores, a profile of standard T-scores is provided as well as the scores themselves. About two-thirds of any given occupational group score above 45 on their own scale. The occupational keys are clustered on the profile sheets into groups determined by a study of the intercorrelations among keys.

DEVELOPMENT OF PROJECT MINI-SCORE TRAINING SUCCESS NORMS AND EMPLOYMENT SUCCESS NORMS

Occupational Groups Included in the Study

Project MINI-SCORE has gathered data on sixty-three different occupational training program groups. The training programs were grouped by personnel from the Minnesota State Department of Vocational Education and the Department of Industrial Education at the University of Minnesota into relatively homogeneous groupings. In many cases, the specific titles given to training programs in a given group are different but the training programs are relatively the same. Each of the group names and the specific titles of training programs falling into a group can be found in Appendix A.

Training Success Norms Population and Occupational Groups

The training success norms (see Appendix B) in this report were developed with data obtained from students who were accepted to and graduated from full-time, day programs offered in the twenty-four cooperating post-high school area vocational-technical schools of Minnesota during the period from Sepember 1, 1966, until July 1, 1970. Profiles have been prepared only for those occupational groups for which at least forty-nine individual sets of data were available. The actual sample used in developing each norm profile is indicated in Appendix D.

The initial printing of the Project MINI-SCORE Minnesota Vocational Interest Inventory Training Success Norms (Pucel and Nelson, 1969) contained data on eleven different occupational groups. Supplement One (Pucel and Nelson, 1970) added seven additional groups. The present publication includes twenty-seven occupational groups. The twenty-seven groups have been separated into three clusters on the basis of sex. This classification system is based on Project MINI-SCORE research which showed differences on many of the measures included in the Project MINI-SCORE test battery which were due to sex (Pucel and others, 1972).

CLUSTER I

PRIMARILY MALE CURRICULA

Agri-Technology
Aircraft Mechanics
Architectural Drafting
Automotive
Carpentry
Chefs and Cooks
Diesel Mechanics
Electronics
Farm Equipment Mechanics
Fluid Power Technology
Machine Shop
Mechanical Drafting and Design
Mechanical Refrigeration, Air Conditioning, and Appliance Repair
Plumbing and Sheet Metal
Power and Home Electricity
Printing and Graphic Arts
Welding

CLUSTER II

CURRICULA WITH BOTH MALE AND FEMALE

Accounting
Data Processing
Interior Design and Sales Assistant
Sales

CLUSTER III

PRIMARILY FEMALE CURRICULA

Clerical Training
Cosmetology
Dental Assistant
Medical Laboratory Assistant
Practical Nursing
Secretarial Training

Employment Success Norms Population and Occupational Groups

The employment success norms (see Appendix C) were developed on a sub-set of the population used to develop the training success norms. The population included persons who were accepted to and graduated from the full-time, day programs of the twenty-four cooperating schools between September 1, 1966, and July 1, 1970, who were followed up on the job one year after training - between September 1, 1966, and July 15, 1970. Of the people followed up on the job, only those who were employed in a job related to their training (based on the Project MINI-SCORE classification presented in Appendix A) were included in the groups used to generate

the employment success norms. (The "employment success" norms in this report could also be called "on-the-job" norms.) Profiles have been prepared for all occupational groups for which at least fifty individual sets of data were available. The sample size of the groups used in developing the norms are presented in Appendix E.

Employment success norms (on-the-job success norms) have been developed for thirteen occupational groups which have been clustered on the basis of sex.

CLUSTER I

PRIMARILY MALE CURRICULA

Automotive
Carpentry
Electronics
Machine Shop
Mechanical Drafting and Design
Power and Home Electricity
Welding

CLUSTER II

CURRICULA WITH BOTH MALE AND FEMALE

Accounting
Data Processing

CLUSTER III

PRIMARILY FEMALE CURRICULA

Clerical Training
Cosmetology
Practical Nursing
Secretarial Training

INTERPRETING THE NORMS

Cautions

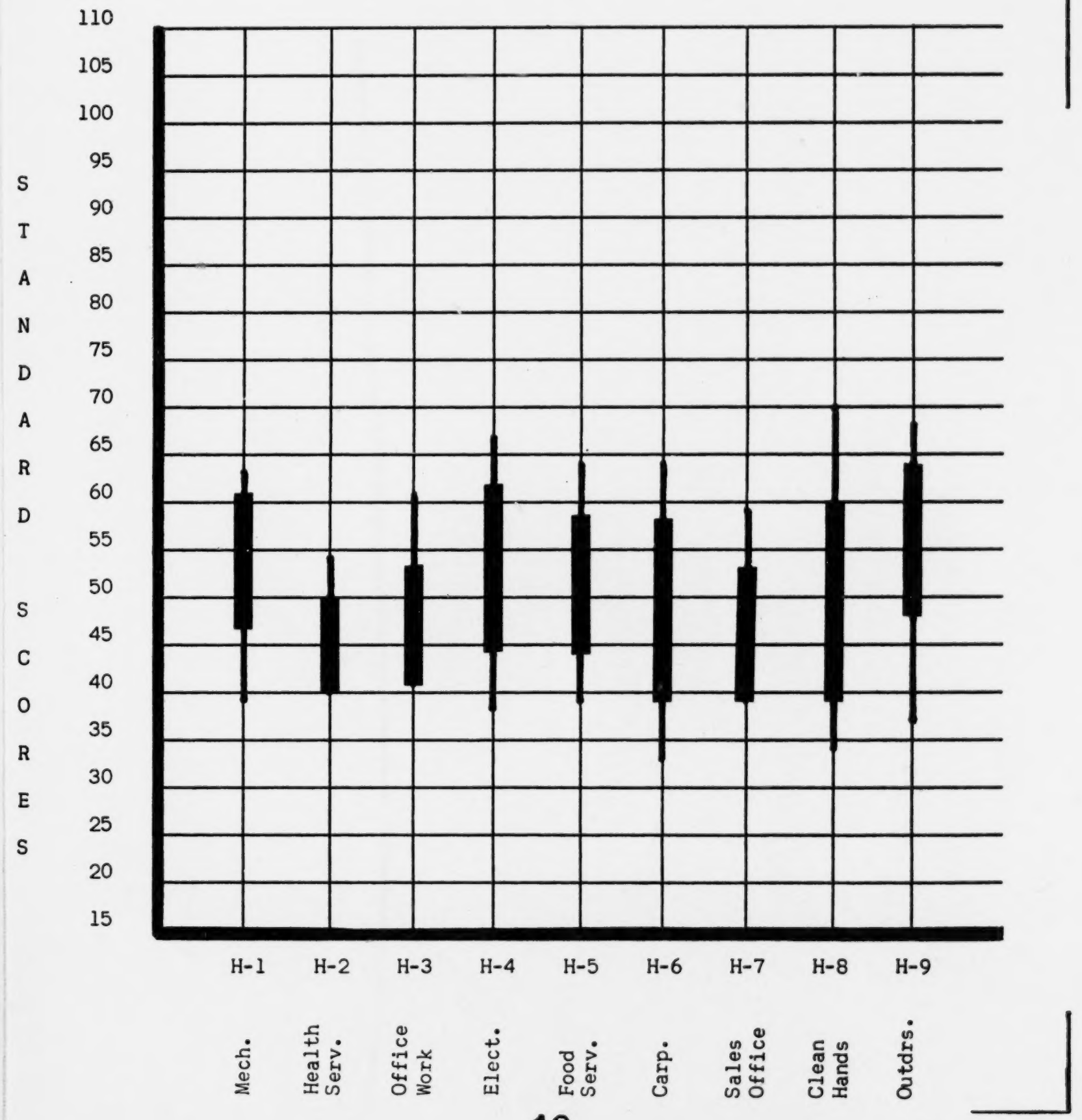
AS WITH THE INTERPRETATION OF ANY NORMS THAT ARE TO BE USED IN THE COUNSELING PROCESS, PERSONS USING THE NORMS ARE CAUTIONED AGAINST USING THEM AS ABSOLUTES. THEY SHOULD BE USED AS COUNSELING TOOLS BY QUALIFIED PERSONNEL. A FURTHER CAUTION IS TO REMIND USERS THAT IF A PERSON HAS AN INTEREST PATTERN SIMILAR TO THAT OF AN OCCUPATIONAL GROUP, THIS DOES NOT INDICATE HIS COMPETENCE TO PERFORM IN THE OCCUPATION.

Description of the Profiles

The profiles represent standard scores for each of the homogeneous keys that were converted from raw scores using the conversion tables developed by Psychological Corporation (Psychological Corporation, 1966). The means and standard deviations of the raw scores for each key for each of the occupational groups are presented in Appendices D and E along with the number of people in each occupational group. Table 1 is an example of such a profile for the automotive group. The light-weight line represents the range between the 5th and 95th percentiles. The top and bottom five percents were eliminated to avoid having to consider extremely high or low scores. The bold bar represents the middle two-thirds of the scores that were obtained most often by persons who successfully completed a training program or who were successfully employed in related occupations. The top of the bar is located at the 83.5 percentile and the bottom of the bar is located at the 16.5 percentile. The percentiles were used in developing the profiles rather than the means and standard deviations because the percentiles are sensitive to skews in the distributions.

TABLE 1

PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
AUTOMOTIVE



Preparing the Profiles for Counseling

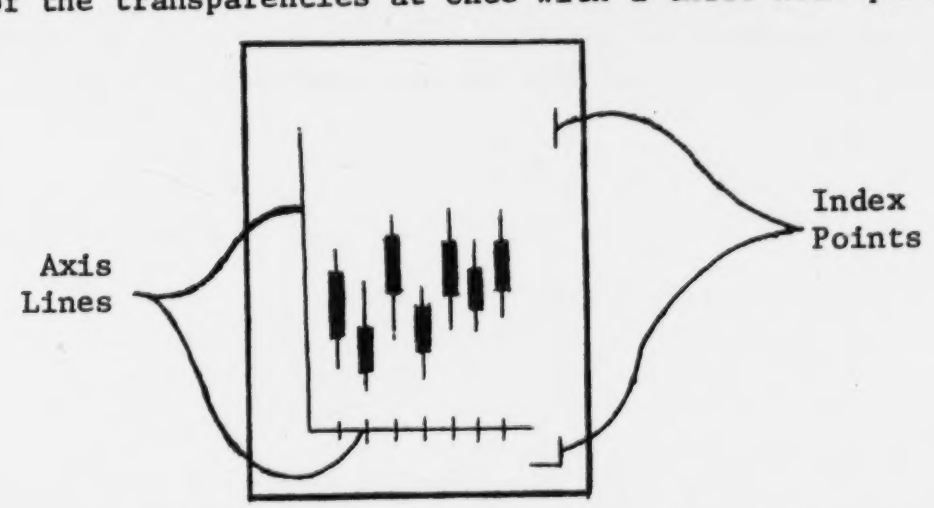
The profiles are organized in Appendices B and C according to the three major clusters for easy reference. A sample student profile summary sheet is also included on page 64.

First, transparencies should be made of the profiles. This can be done as follows:

a. Take the profiles out of the booklet.

b. Each of the profile sheets has two index points. Match the lower right hand corner of the transparency material with the right angle index point in the lower right hand corner of the profile sheet. Match the right hand edge of the transparency material with the line index point in the upper right hand corner of the profile sheet. Make the transparency.

c. After making transparencies of all of the profiles in a given cluster, punch all of the transparencies at once with a three hole punch.

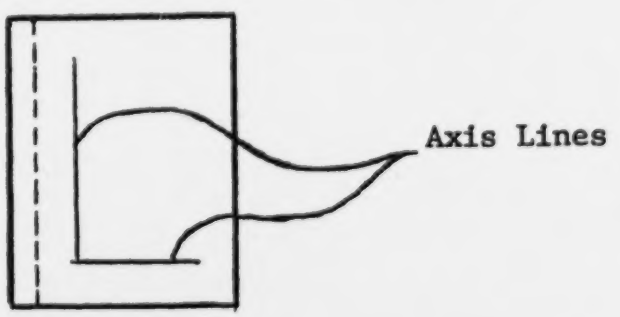


d. Place the transparencies into a three-ring binder. When looking through all of the transparencies in a given cluster at one time, all of the axis lines should match.

Second, duplicate the student profile summary sheets. To make additional copies of the student profile summary sheets do the following:

a. Take the sample sheet out of the booklet.

b. Trim the profile summary sheet along the dotted line.



c. Duplicate the sheets after they have been trimmed. Make sure the left hand edge of the new sheets is the same distance from the axis lines as the dotted line is or was on the sample.

Using the Prepared Profiles in Counseling

1. Administer the MVII in accordance with the MVII manual.

2. Obtain standard scores on the homogeneous keys for a given individual.

3. Plot the individual's scores on a student profile summary sheet. MAKE SURE YOU USE THE ACTUAL NUMERICAL SCORES PROVIDED ON THE ANSWER SHEETS AND DO NOT TRY TO TAKE SCORES FROM THE PLOTTED ANSWER SHEET PROFILES WHICH ARE PROVIDED BY THE SCORING AGENCY.

4. Place the individual's student profile summary sheet under each of the transparencies to determine how similar the individual's profile is to that of people who have successfully completed training or who are successful on the job in each of the occupational areas.

It is recommended that each individual be allowed to make such comparisons himself with the counselor. If a person's profile does not fall within the bold portion of all of the profile stalks of a given occupational group, this does not mean he could not succeed in the occupation. It only means he is more different on the dimension measured by the MVII than 66 per cent of those who have successfully completed training or who are successful on the job.

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Pucel, D. J., and Nelson, H. F. Minnesota Vocational Interest Inventory Training Success Norms Including Supplement One. Minneapolis, Minnesota: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970, ERIC 042-025; VT 011-393.

Pucel, D. J., Nelson, H. F., and Mohamed, D. A. The Ability of Standardized Test Instruments to Predict Training Success and Employment Success. Minneapolis, Minnesota: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, March, 1972.

APPENDIX A

PROJECT MINI-SCORE OCCUPATIONAL TRAINING PROGRAM GROUPS

MECHANICS AND MACHINERY REPAIR

6. Automotives
   - Auto Mechanic
   - Auto Body Repair
   - Automobile Management
   - Automobile Technician

10. Diesel Mechanics
    - Diesel Mechanics
    - Diesel Mechanics Technicians
    - Truck & Diesel Mechanics

13. Farm Equipment Mechanics
    - Farm Equipment Mechanics
    - Farm Mechanics I & II

18. Aircraft Mechanics
    - Aviation Mechanics

19. Service Station Mechanic
    - Automotive Services
    - Automotive Service Station Mechanics Attendant
    - Mechanical Repair & Servicemen

25. Marine and Small Engine Mechanics

56. Heavy Equipment Operation and Repair

APPLIANCE & REFRIGERATION REPAIR

14. Appliance Repair

30. Office Machine Mechanic

32. Mechanical Refrigeration & Air Conditioning

7. PRINTING AND GRAPHIC ARTS

    - Graphic Arts
    - Graphic Arts I, letter press
    - Graphic Arts II, Photolithography and off-set Printing
    - Off-set Printing

21. PLUMBING AND SHEETMETAL

22. FLUID POWER TECHNOLOGY

SELLING AND RELATED WORK

41. Sales
    - Sales Management
    - Sales & Marketing
    - Sales Training

46. Business Management

AGRICULTURAL RELATED OCCUPATIONS

37. Agri-Technology
    - Agri-Chemicals & Fertilizers, Sales & Service
    - Agricultural Technicians (Animal Science)
    - Agricultural Technician (Plant Science)
    - Agricultural Sales Technician

42. Farm Equipment Sales
    - Farm Equipment Sales & Service
    - Partsman Training

50. Agri-Business
    - Agri-Business Management
    - Agri-Business Office Training

51. Farm Management

DRAFTING, ARCHITECTURAL, MECHANICAL AND TECHNICAL

8. Mechanical Drafting and Design
   - Engineering Drafting
   - Industrial Drafting
   - Industrial Drafting Technology
   - Machine Drafting
   - Mechanical Drafting
   - Technical Drafting
   - Design Technology
   - Drafting and Design Technology

9. Architectural Drafting

35. Highway Technology
    - Highway Technicians
    - Highway Technology
    - Civil Technology

44. INTERIOR DESIGN & SALES ASSISTANT

FOODS

15. Chefs and Cooks
Cook, Institutional
Hotel and Restaurant Cooking

31. Bakery Procedures

52. Food Management
Management & Food Service

62. Butcher and Meat Cutting

ELECTRICITY AND ELECTRONICS

1. Electronics
Electronics
Electronics, Communications
Electronics, Computer Maintenance
Electronics, Industrial & Home Entertainment Service
Electronics, Industrial Technical
Electronics, Radio & Television
Electronics, Technician Communications
Electronics, Technician Industrial
Electronics, Technician
Electronics, Technology

2. Power and Home Electricity
Electrical
Electrical, Construction
Electrical Maintenance
Electrical Technology
Lineman Electrician
Power and Plant Operation

58. Telephone Communications

CONSTRUCTION INDUSTRY

4. Carpentry
Building Construction
Carpentry

28. Bricklaying

WOODWORKING INDUSTRY

4. Carpentry
Building Construction
Carpentry

20. Cabinet Making

MACHINE TRADE OCCUPATIONS

5. Tool and Die
Tool and Design Technician
Tool and Die Maker
Tool, Die, and Mold Maker

11. Machinist
Machine Operator
Machinist
Production Machinist

12. Welding

23. Pattern Maker

26. Plastic Injection Molding Technician

BUSINESS, ACCOUNTING, CLERICAL, SECRETARIAL

45. Accounting

47. Clerical Training
Clerical Record Keeping
Clerk, General Office
Clerk-Typist
Clerk-Typist Machine Operator

48. Secretarial Training
Educational Secretary
Hospital Station Secretary
Secretarial Training, General
Secretarial Training, Medical
Stenographic Training
Medical Office Assistant
Medical Office Service
Legal Secretary

49. Data Processing
Clerical Training & Data Processing
Clerical Training & Key Punch
Tabulating Machine Operator (Unit Records)

HEALTH SERVICES

3. Practical Nursing

33. Dental Assistant

39. Medical Laboratory Assistant

40. WRITING

JEWELRY AND WATCH REPAIR

27. Watch Repair

55. Jewelry

FURNITURE MAKING

20. Cabinet Making

29. Upholstering

OPTICAL AND MEDICAL LAB

38. Optical Technology

39. Medical Laboratory Assistant

GROOMING

17. Cosmetology

24. Barbering

CLOTHING

53. Needle Arts

54. Tailoring

57. Fashion Merchandising

FOREST INDUSTRIES

36. Paper & Pulp Technology

61. Conservation and Forestry

LANDSCAPE AND FLORISTRY

34. Nursery-Landscape Technology

43. Retail Floristry

16. SHOE REPAIRING

59. INTERNATIONAL DOCUMENTS SPECIALIST

60. LAW ENFORCEMENT

63. BROADCASTING

APPENDIX B

MVII HOMOGENEOUS KEY TRAINING SUCCESS NORM PROFILES

CLUSTER I

PRIMARILY MALE CURRICULA

Agri-Technology 14
Aircraft Mechanics. 15
Architectural Drafting. 16
Automotive. 17
Carpentry 18
Chefs and Cooks 19
Diesel Mechanics. 20
Electronics 21
Farm Equipment Mechanics. 22
Fluid Power Technology. 23
Machine Shop. 24
Mechanical Drafting and Design. 25
Mechanical Refrigeration, Air Conditioning,
and Appliance Repair 26
Plumbing and Sheet Metal. 27
Power and Home Electricity. 28
Printing and Graphic Arts 29
Welding 30

CLUSTER II

CURRICULA WITH BOTH MALE AND FEMALE

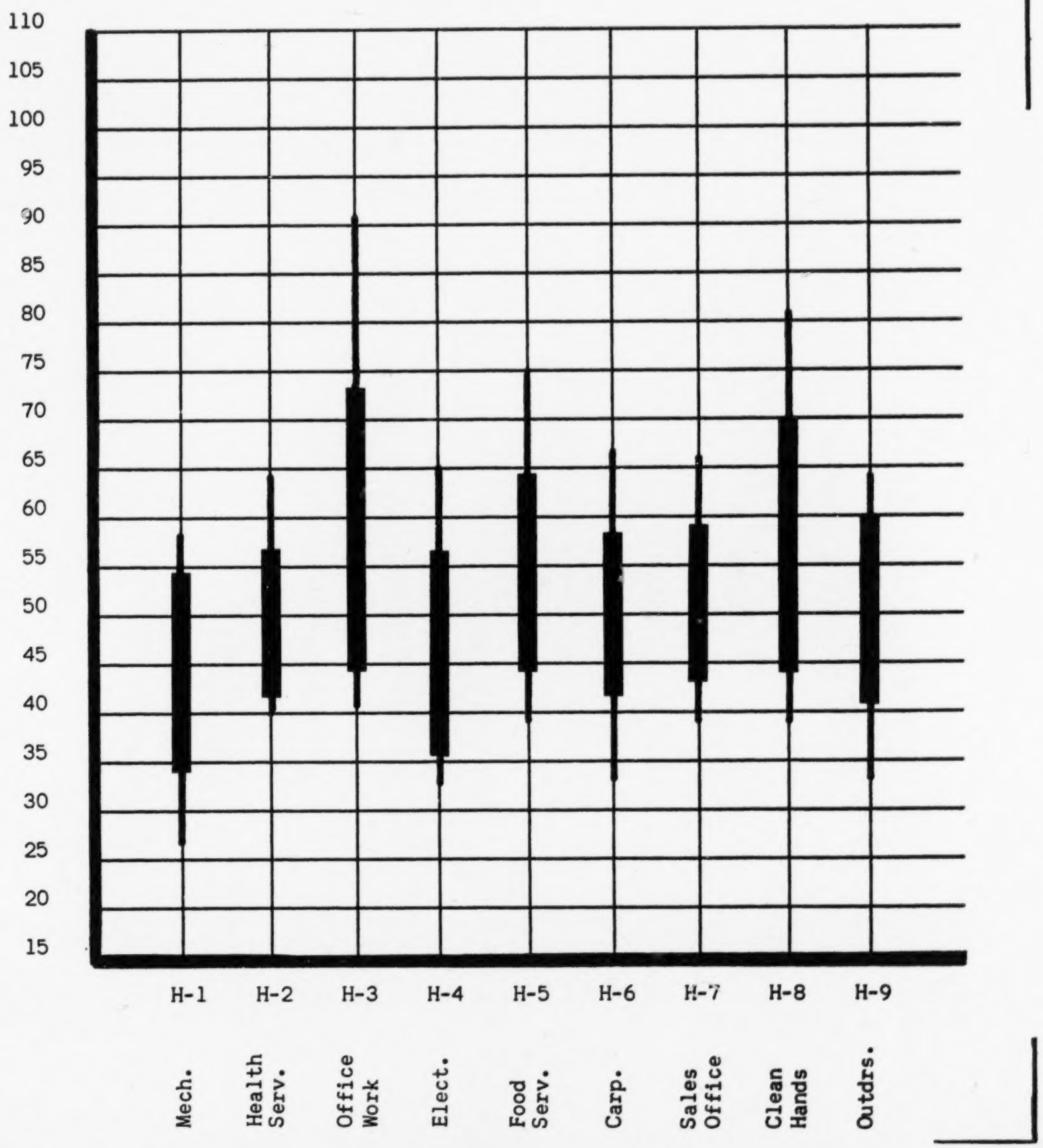
Accounting. 31
Data Processing 32
Interior Design and Sales Assistant 33
Sales 34

CLUSTER III

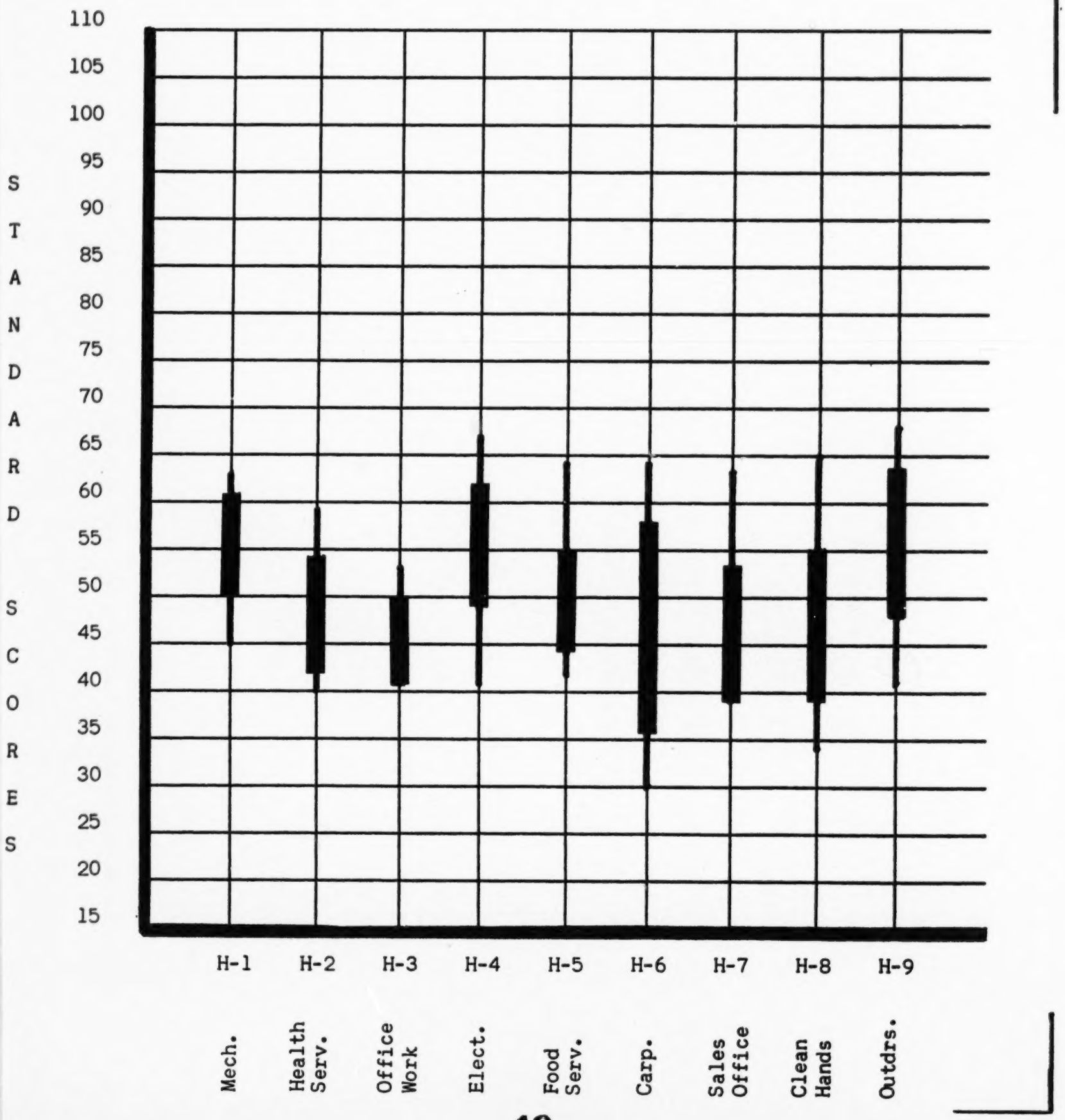
PRIMARILY FEMALE CURRICULA

Clerical Training 35
Cosmetology 36
Dental Assistant. 37
Medical Laboratory Assistant. 38
Practical Nursing 39
Secretarial Training. 40

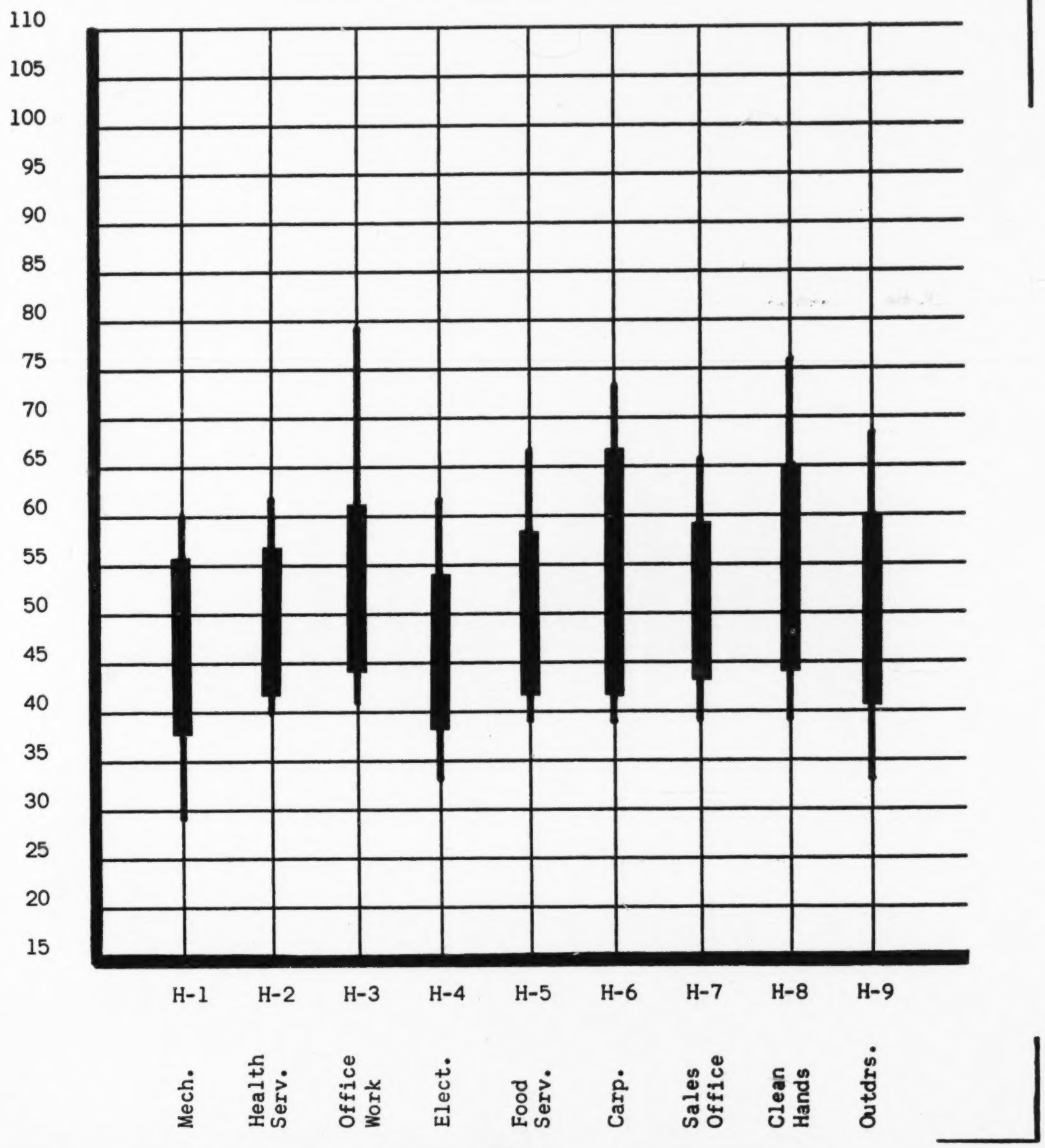
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
AGRI-TECHNOLOGY



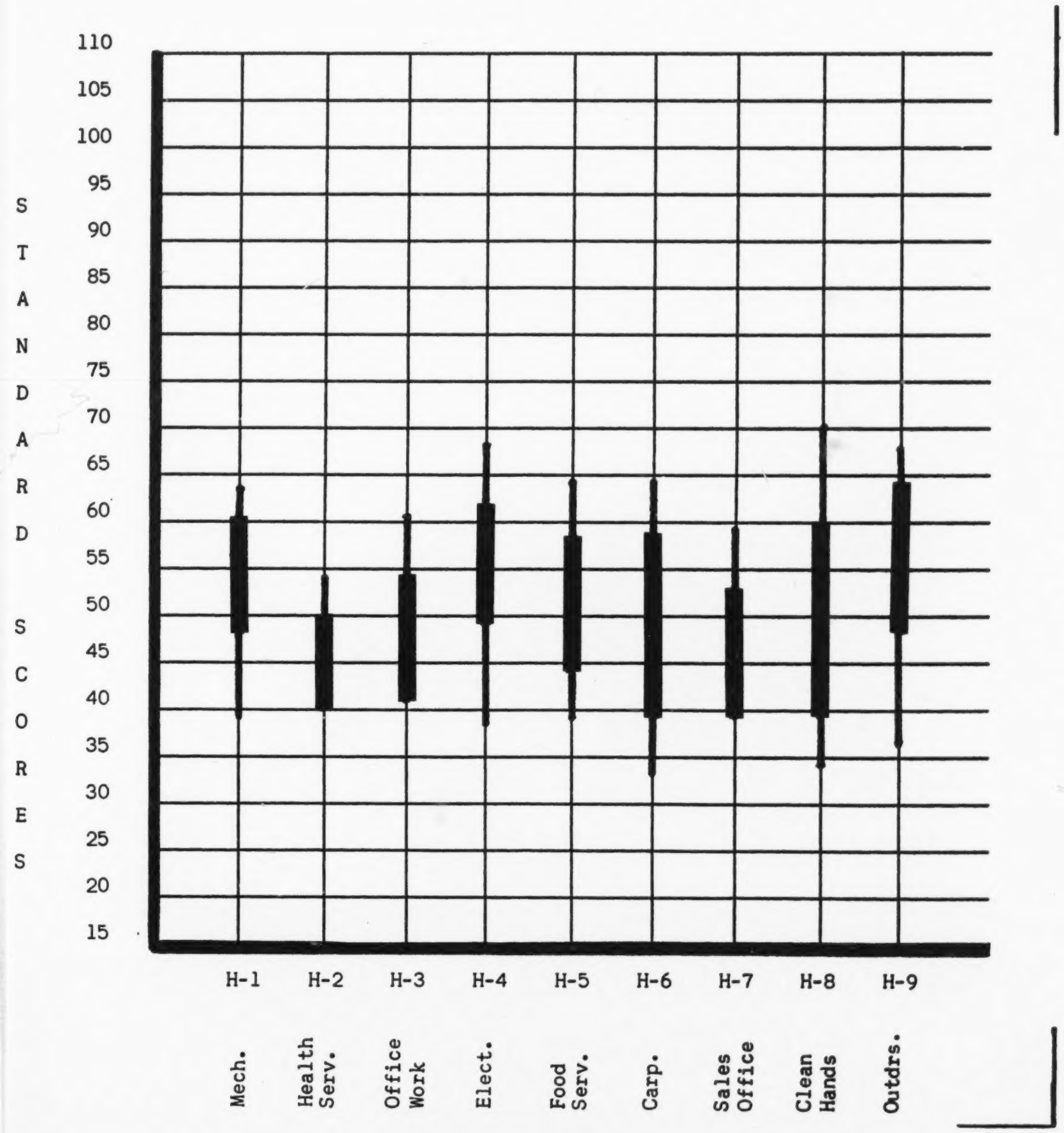
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
AIRCRAFT MECHANICS



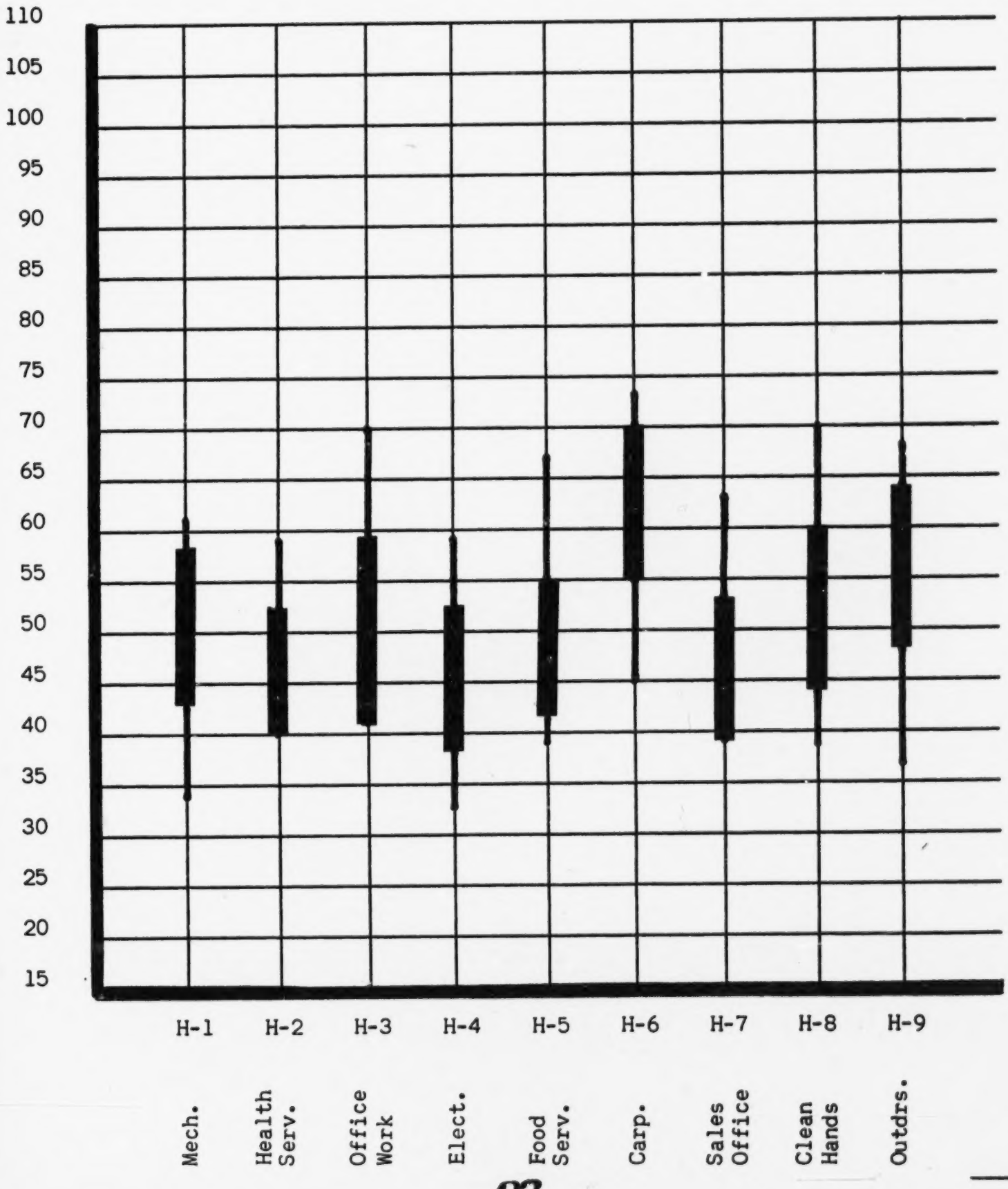
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
ARCHITECTURAL DRAFTING



PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
AUTOMOTIVE

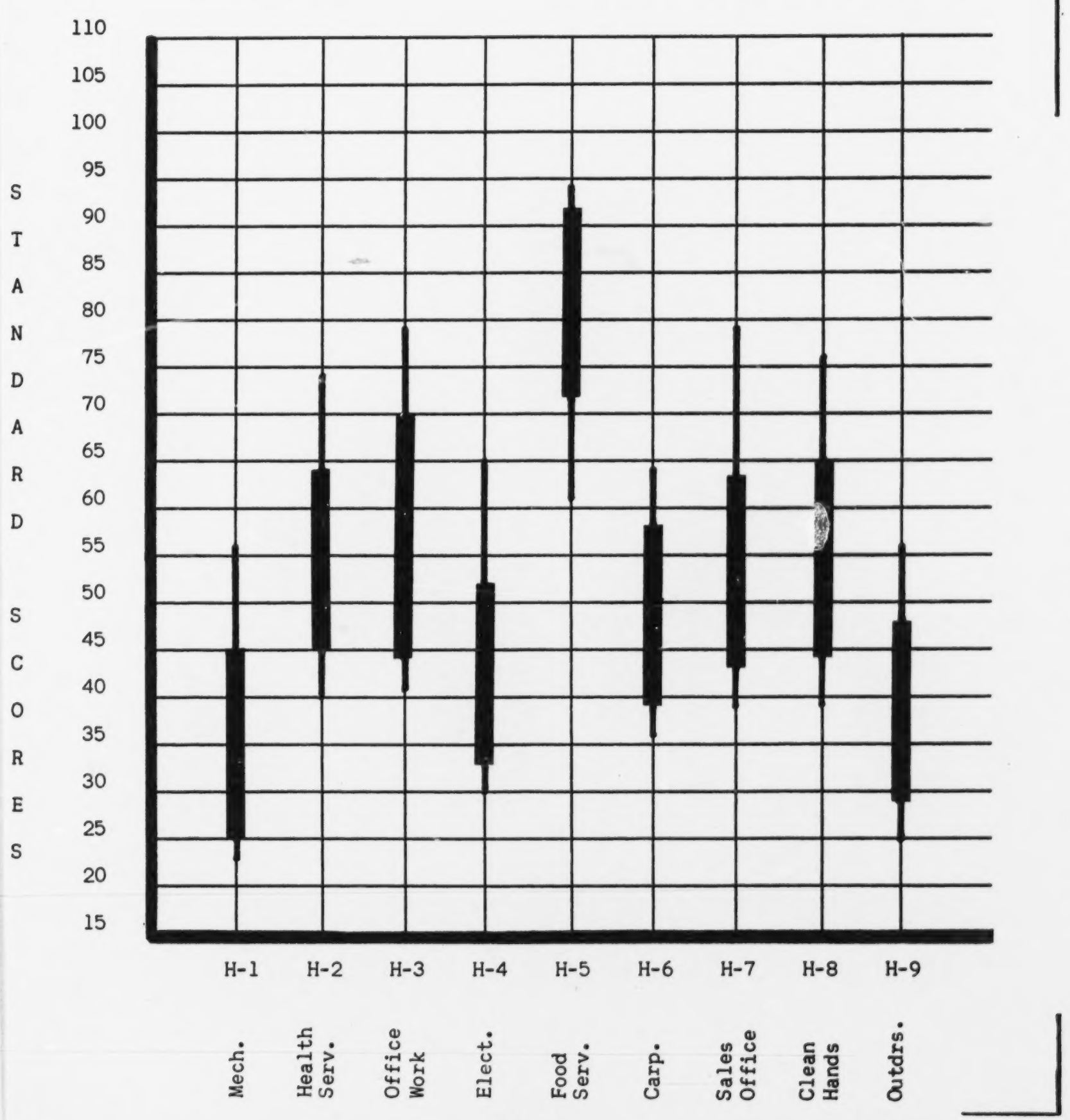


PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
CARPENTRY

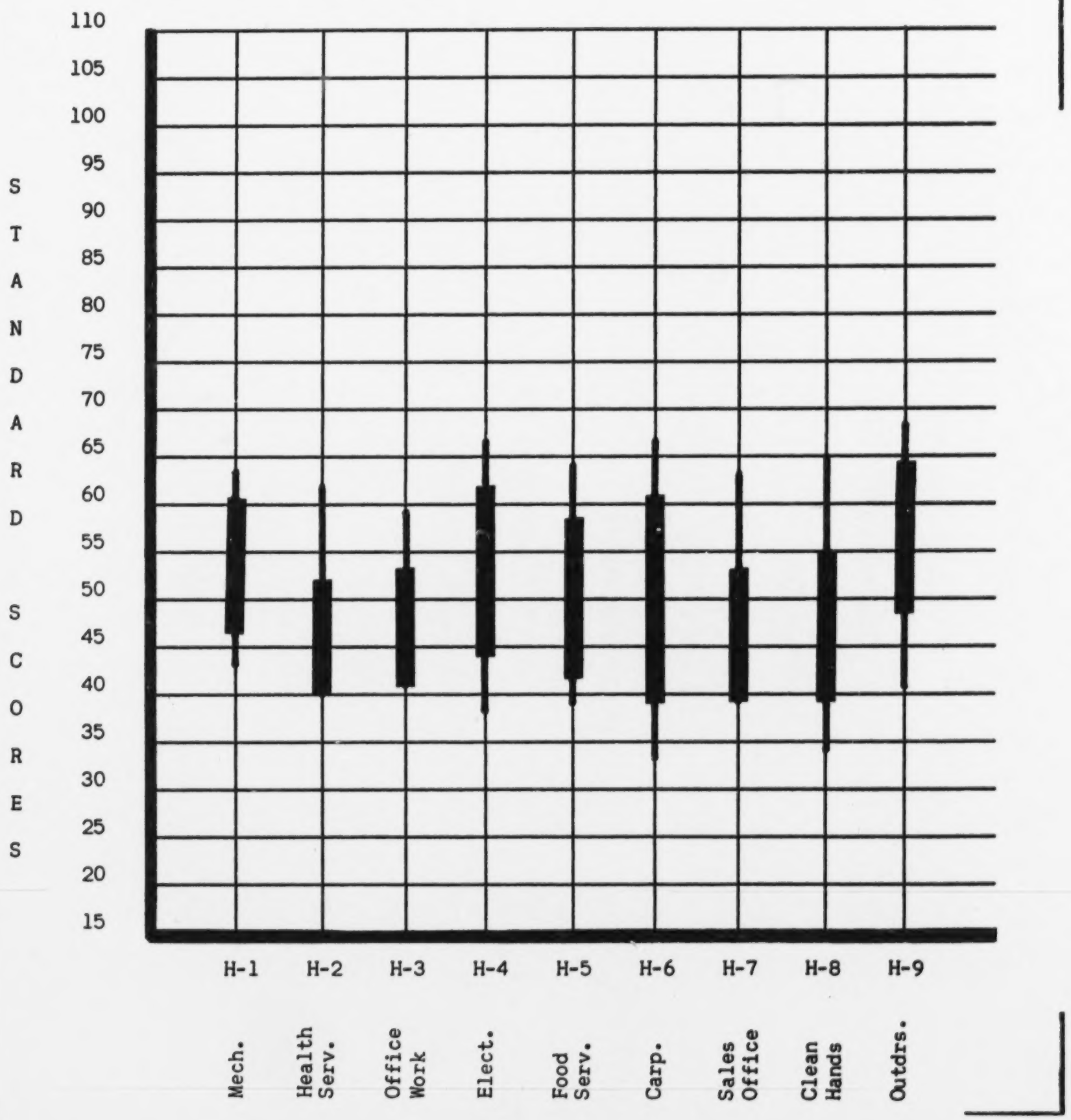


STANDARD SCORES

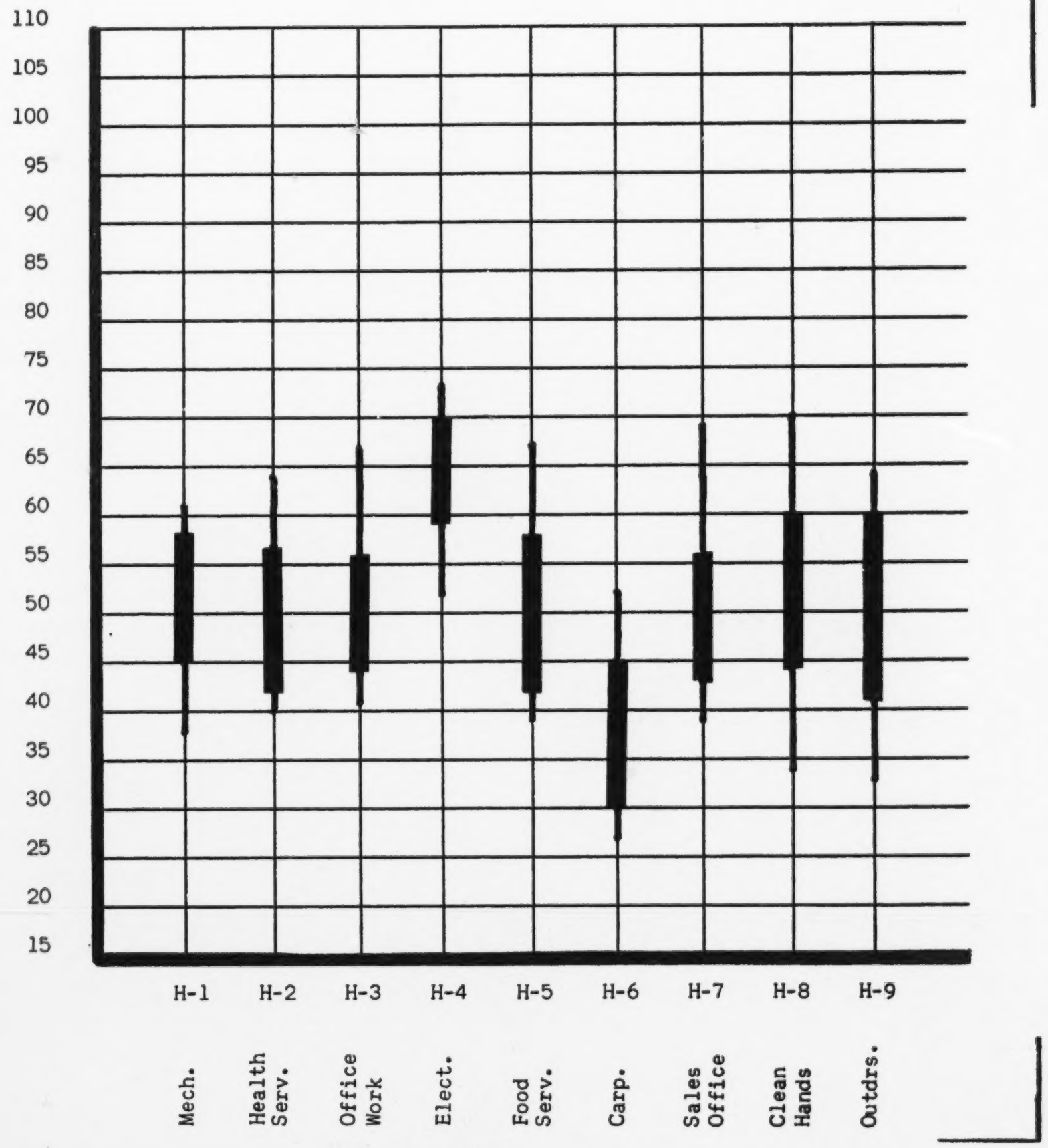
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
CHEFS AND COOKS



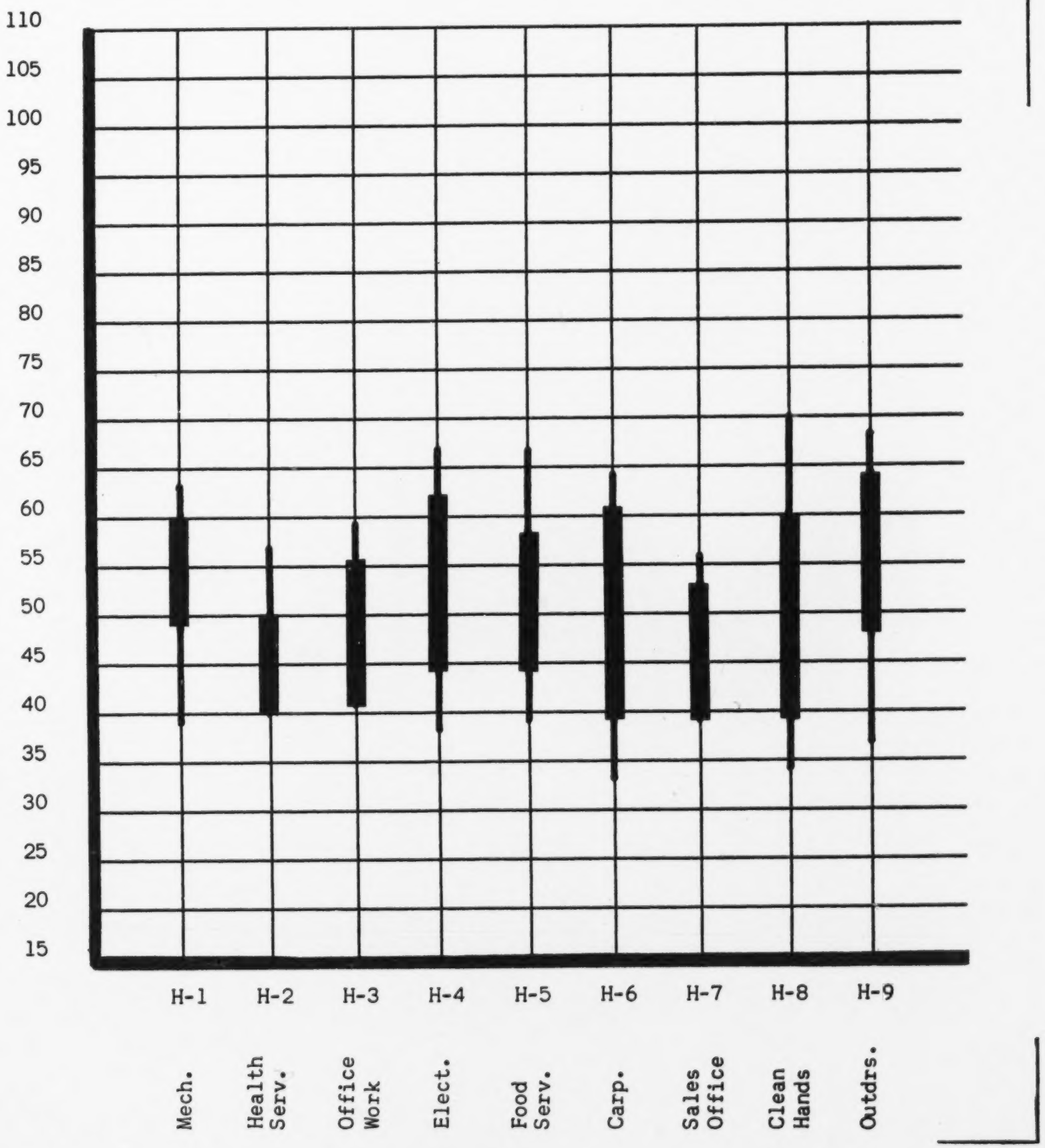
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
DIESEL MECHANICS



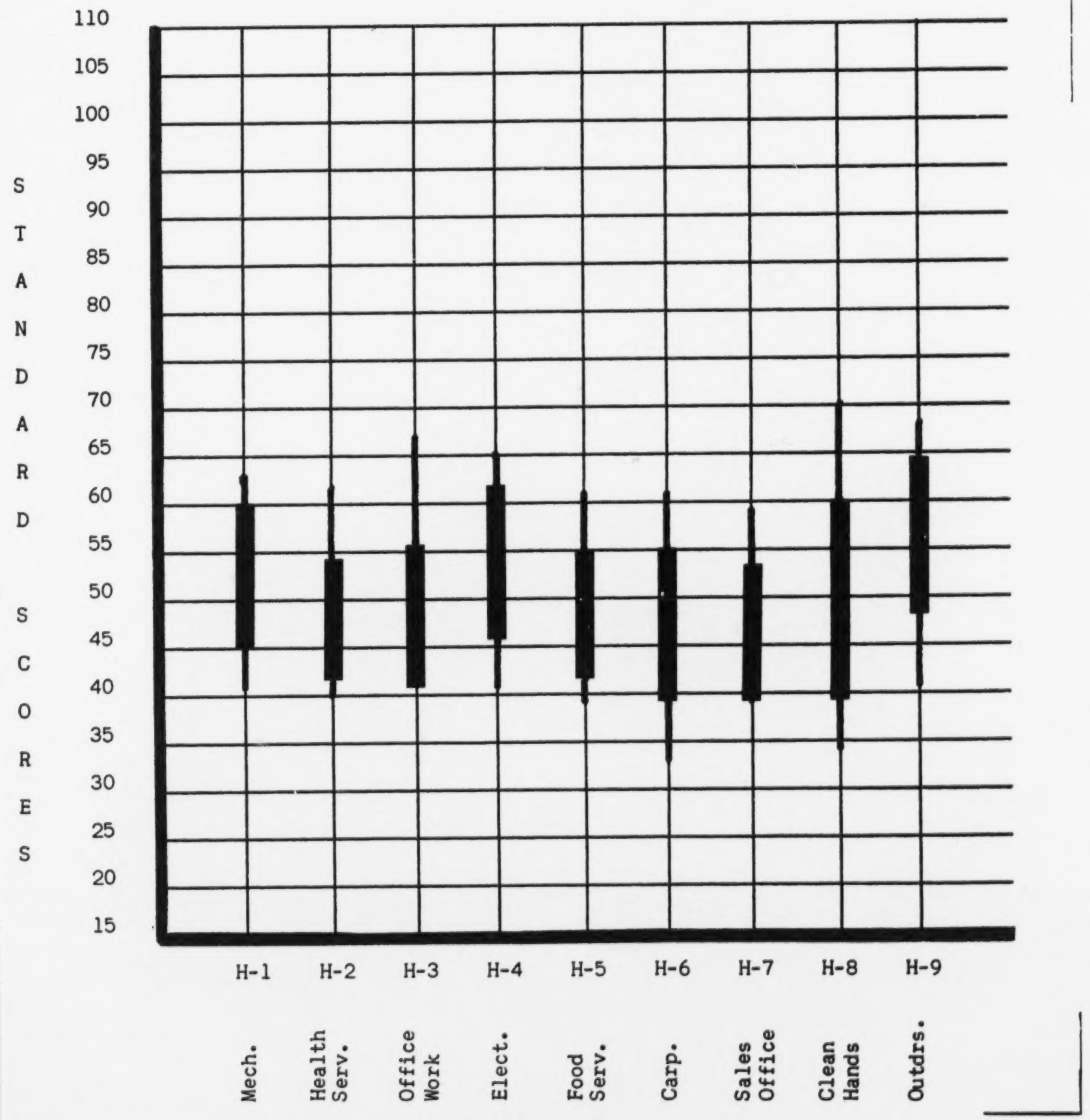
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
ELECTRONICS



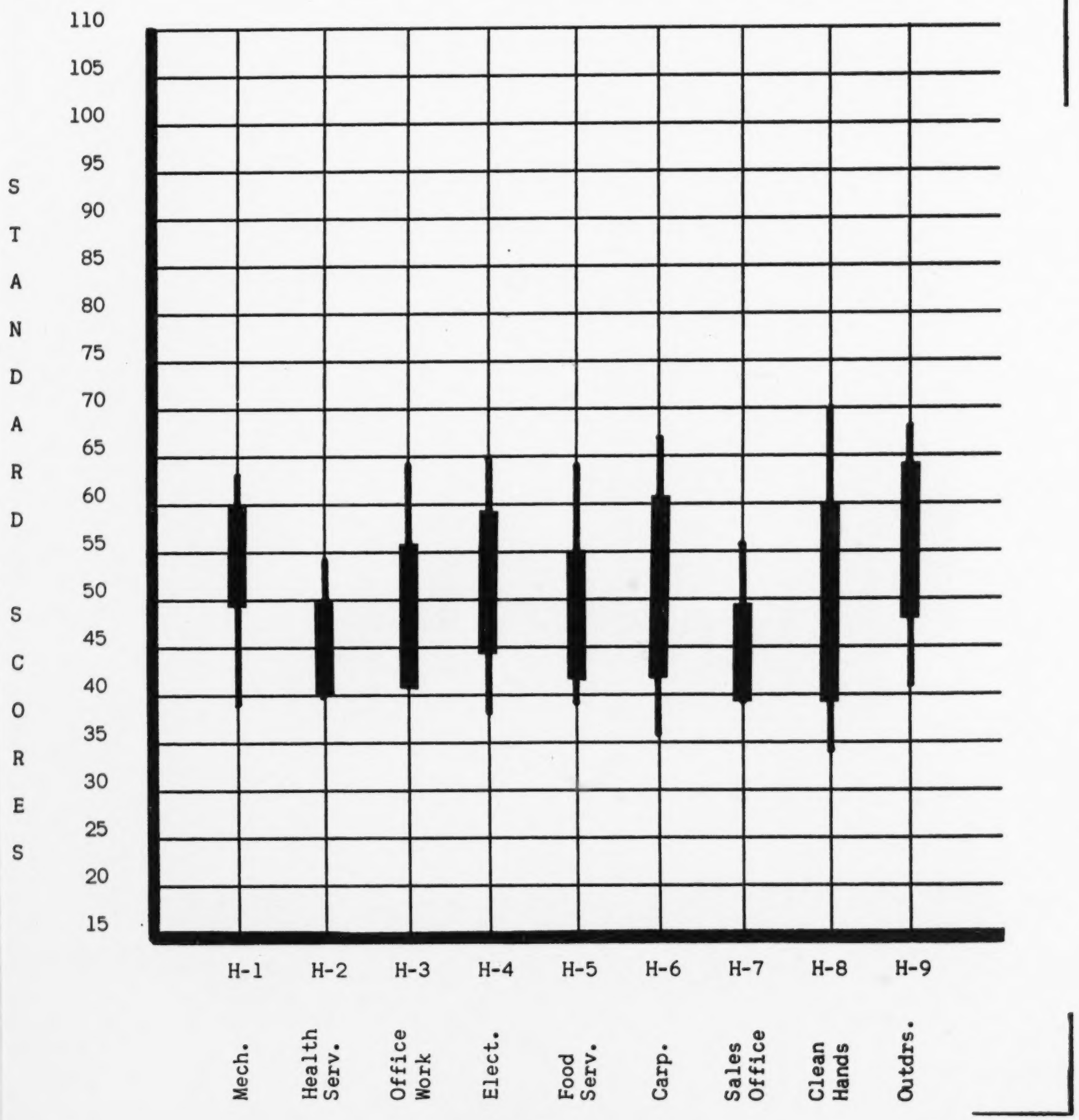
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
FARM EQUIPMENT MECHANICS



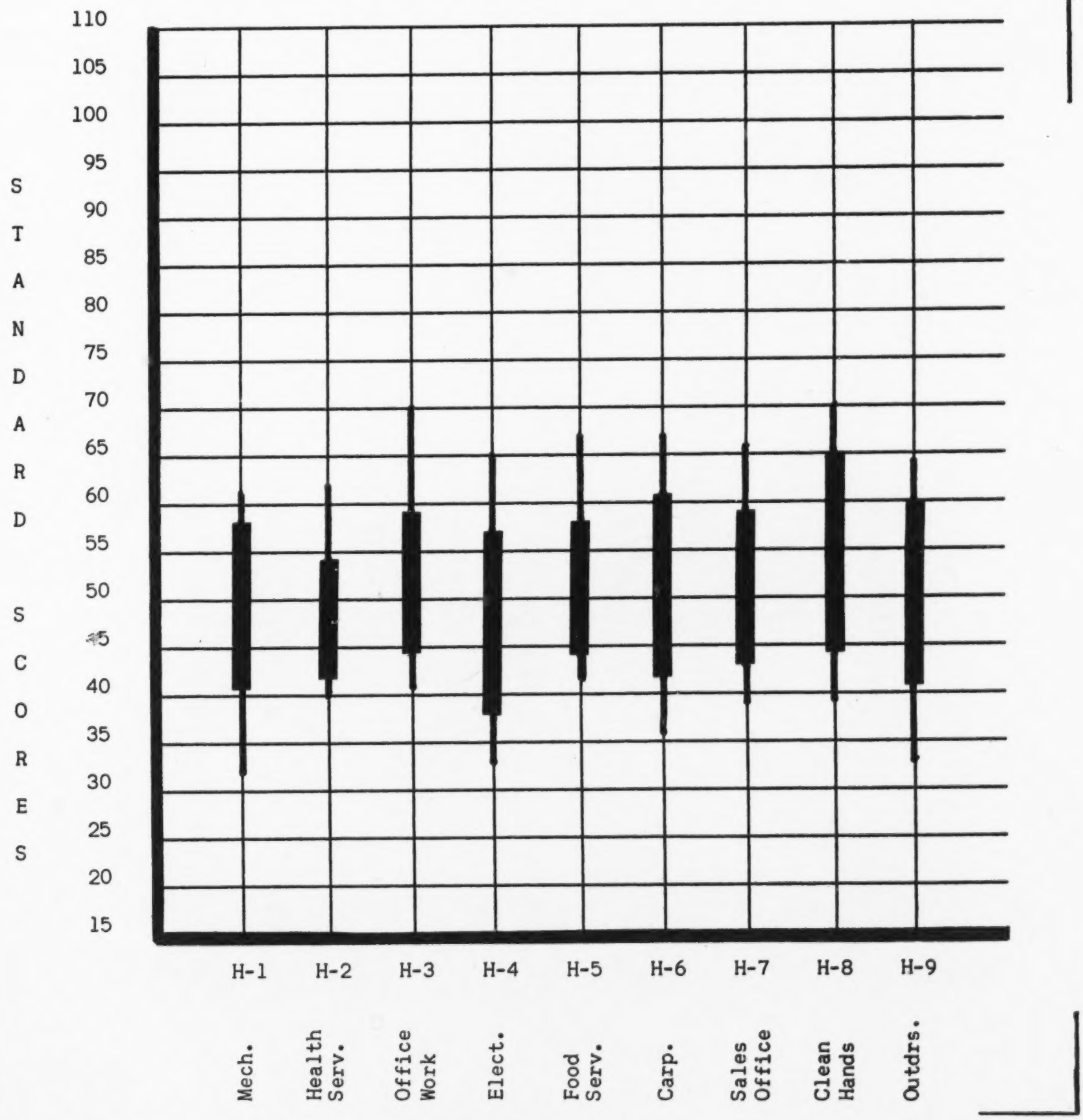
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
FLUID POWER TECHNOLOGY



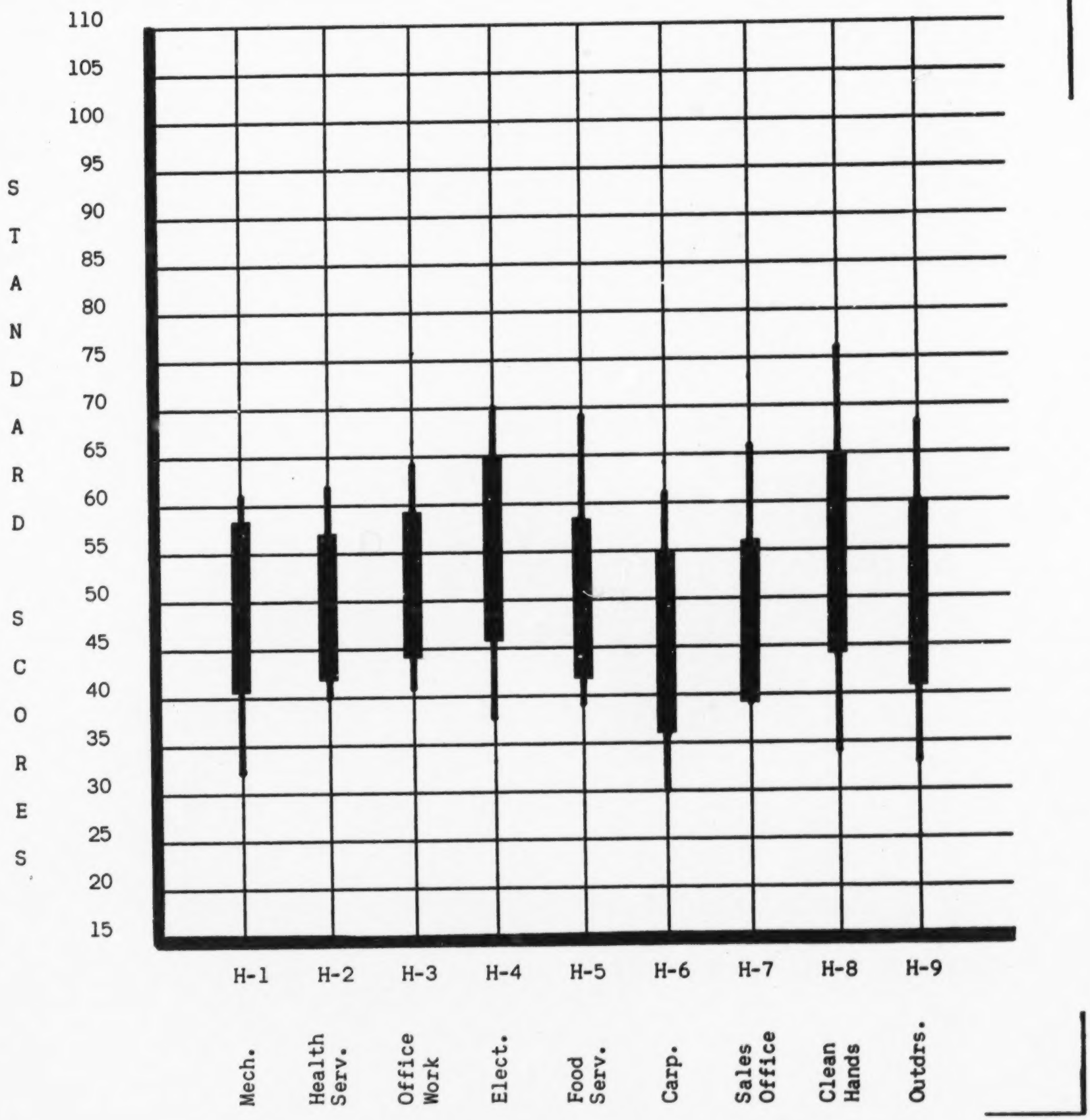
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MACHINE SHOP



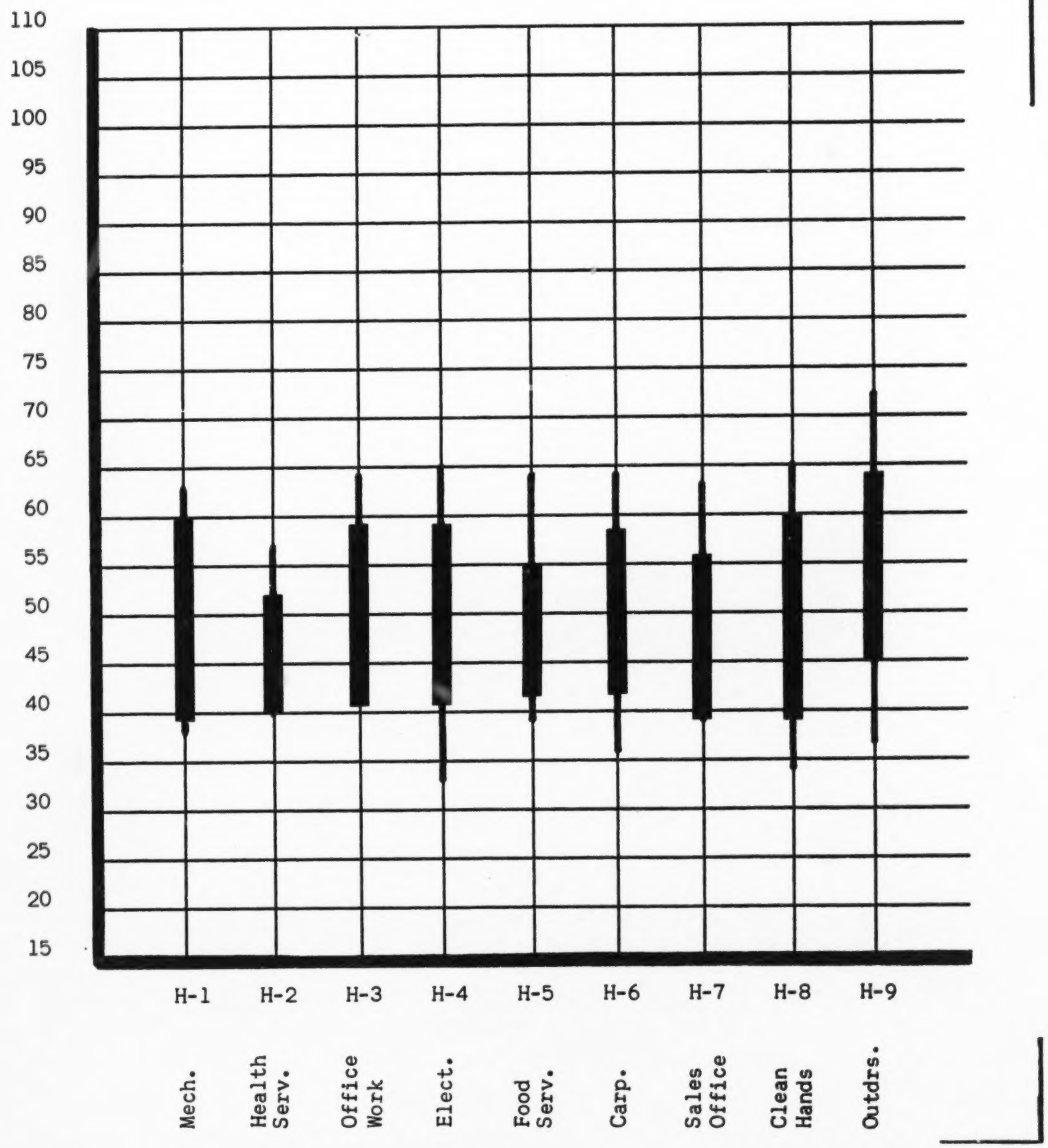
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MECHANICAL DRAFTING AND DESIGN



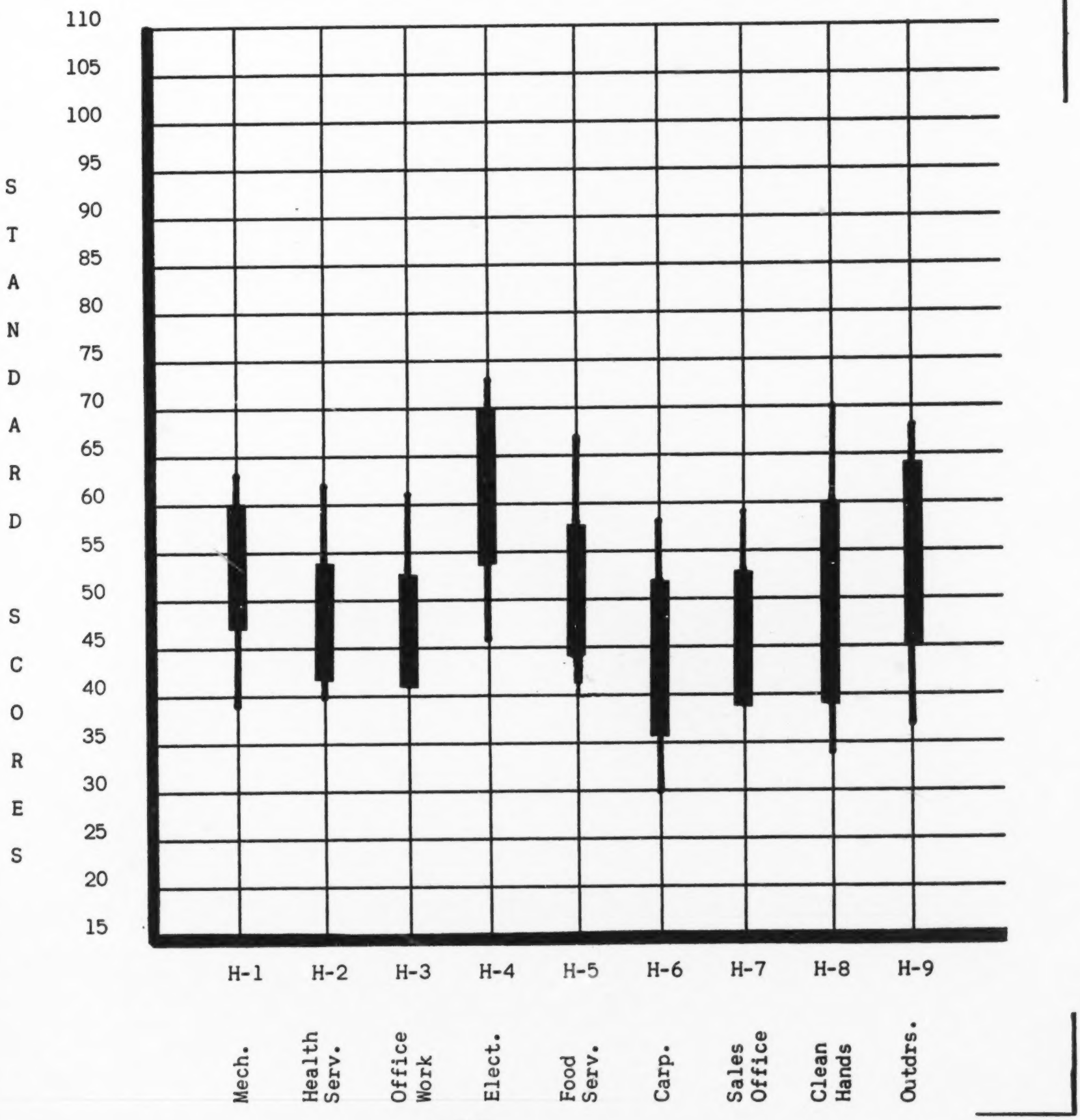
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MECHANICAL REFRIGERATION, AIR CONDITIONING
AND APPLIANCE REPAIR



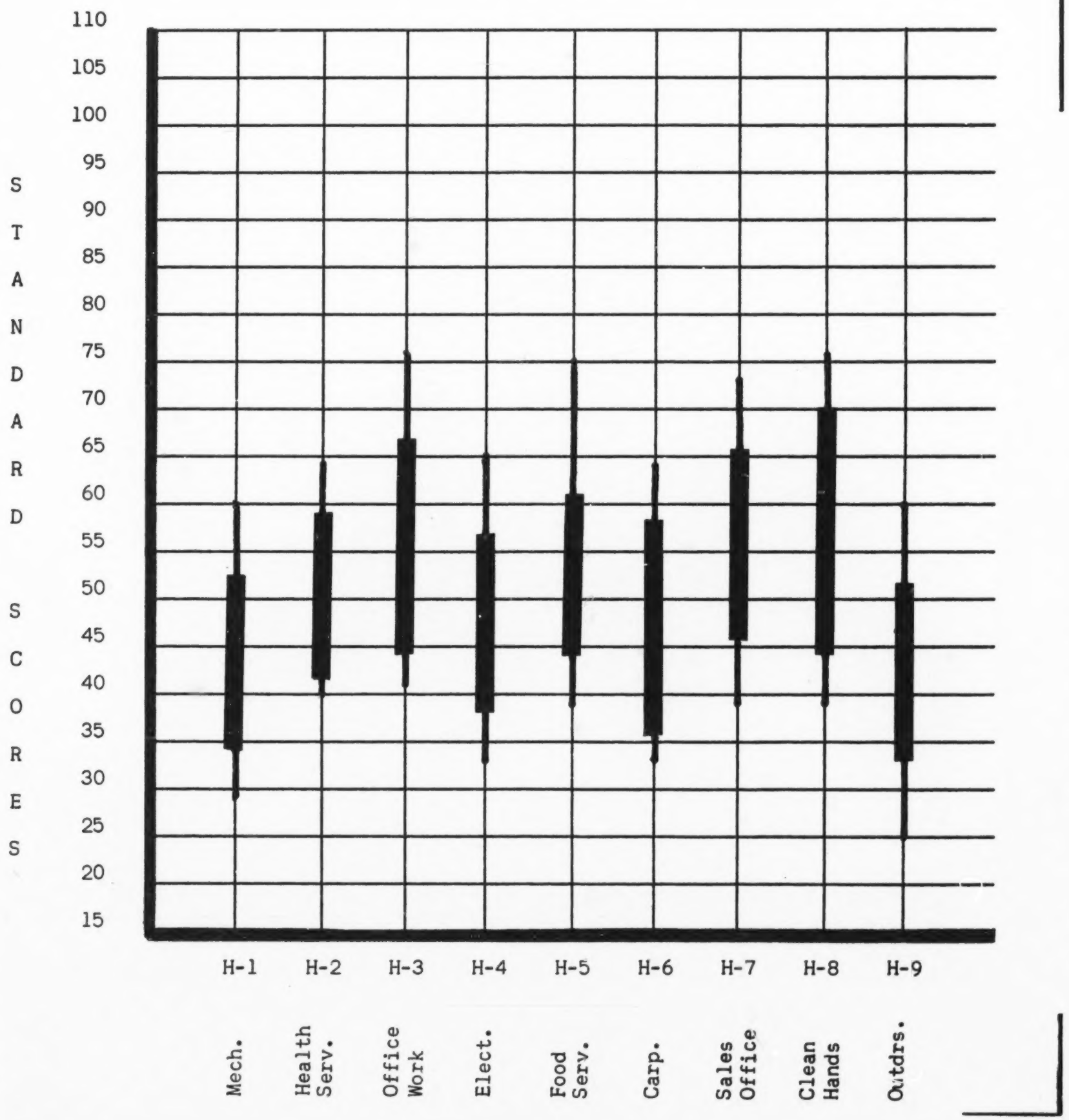
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
PLUMBING AND SHEET METAL



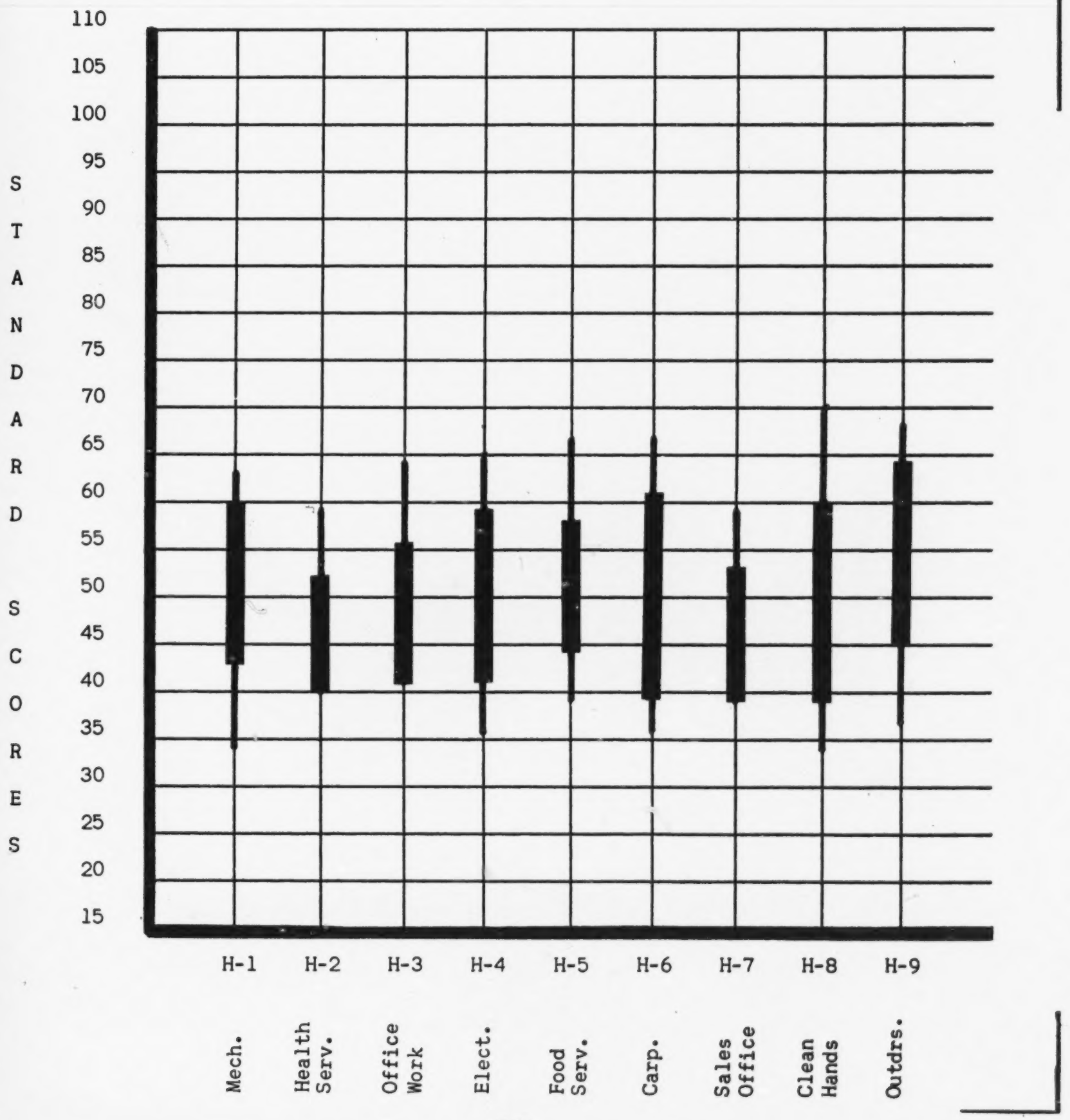
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
POWER AND HOME ELECTRICITY



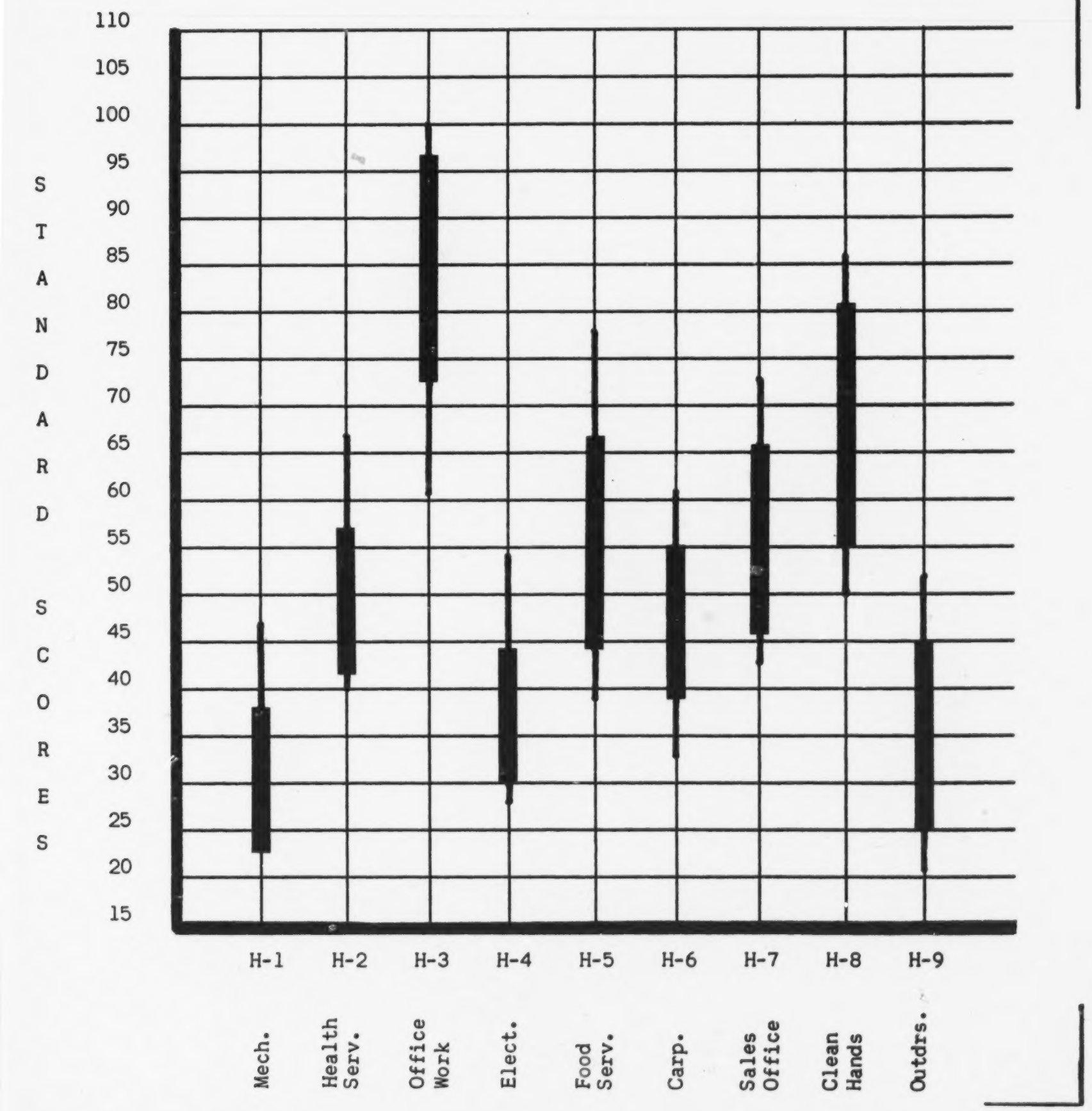
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
PRINTING AND GRAPHIC ARTS



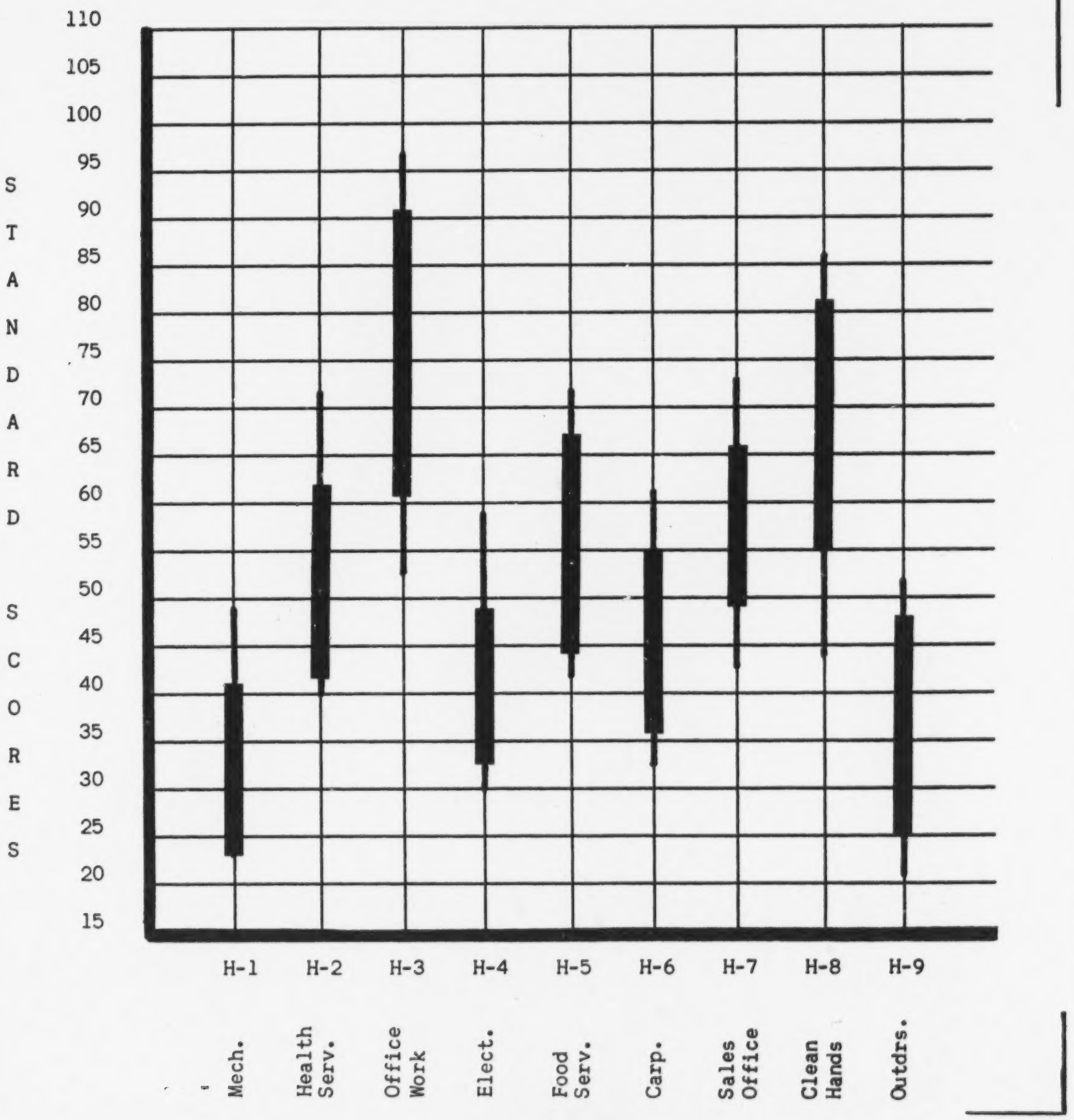
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
WELDING



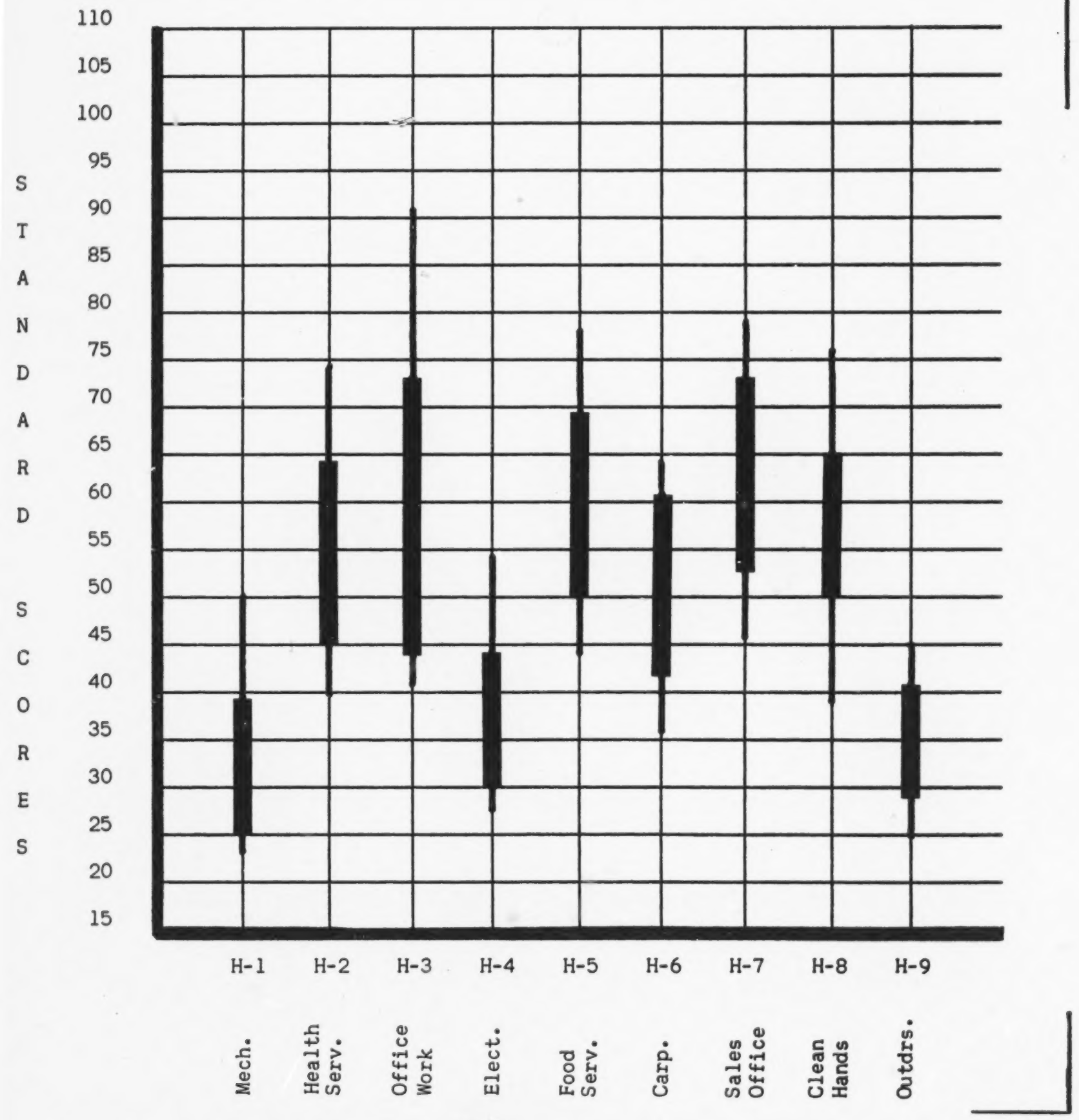
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
ACCOUNTING



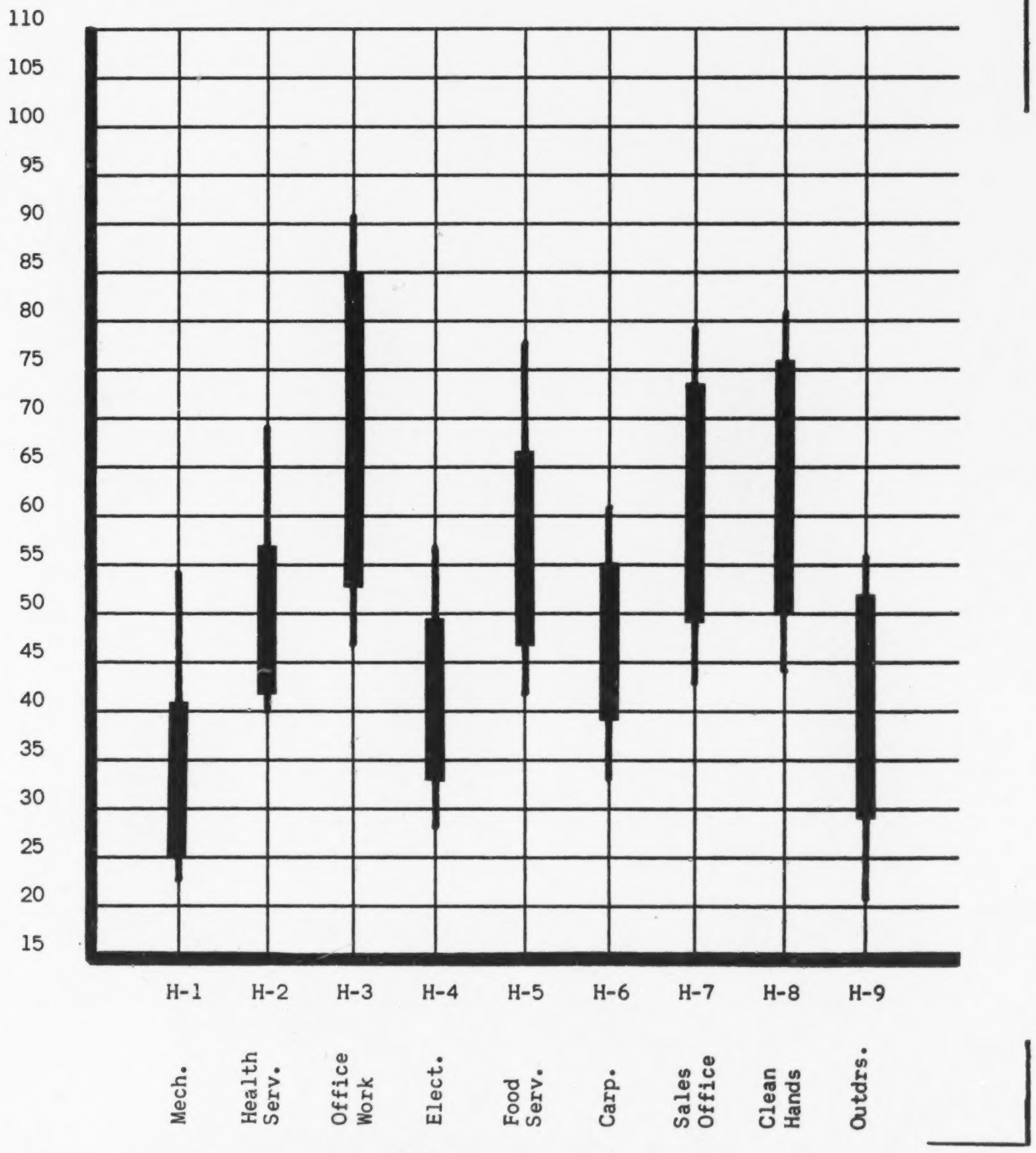
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
DATA PROCESSING



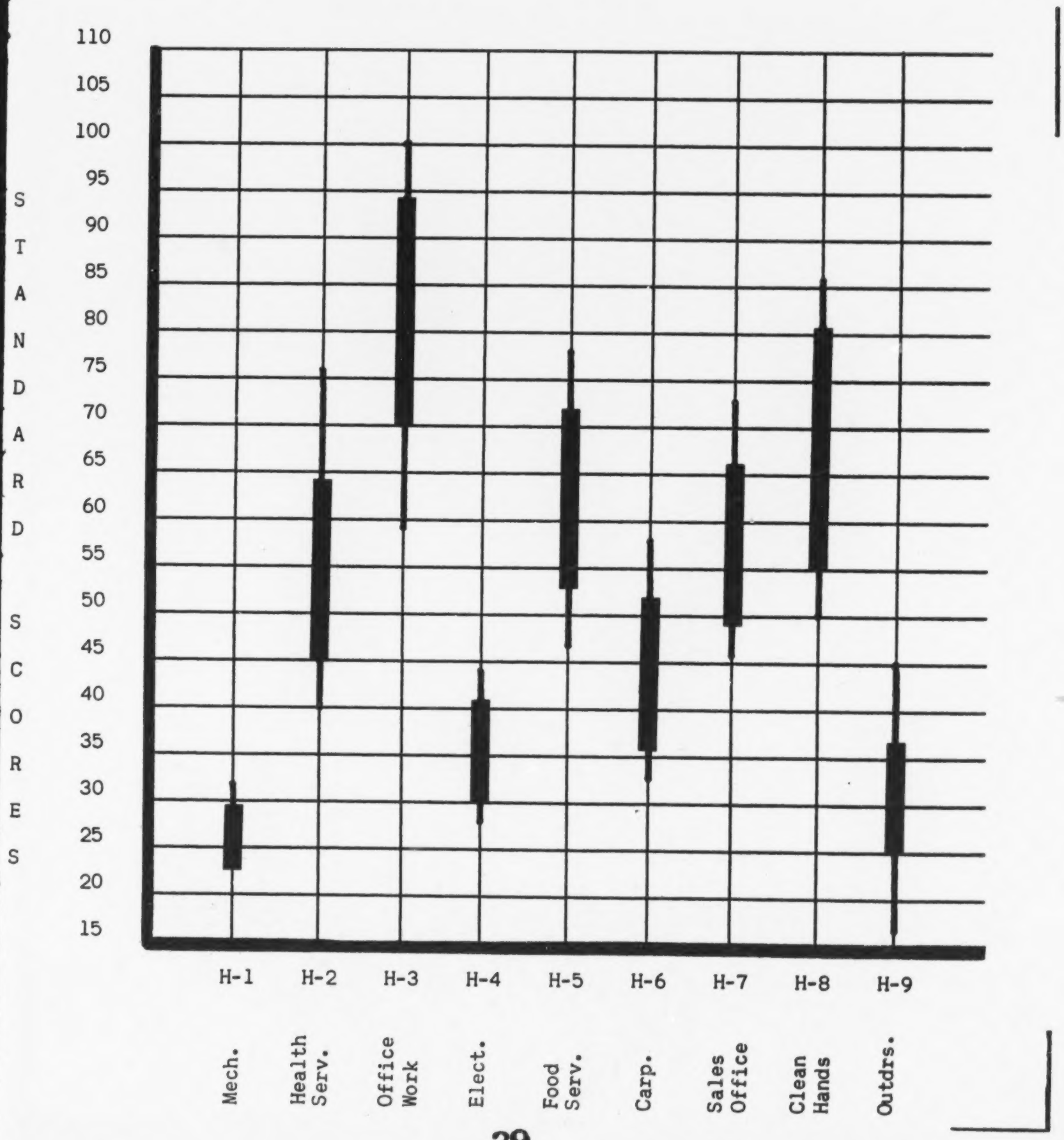
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
INTERIOR DESIGN AND SALES ASSISTANT



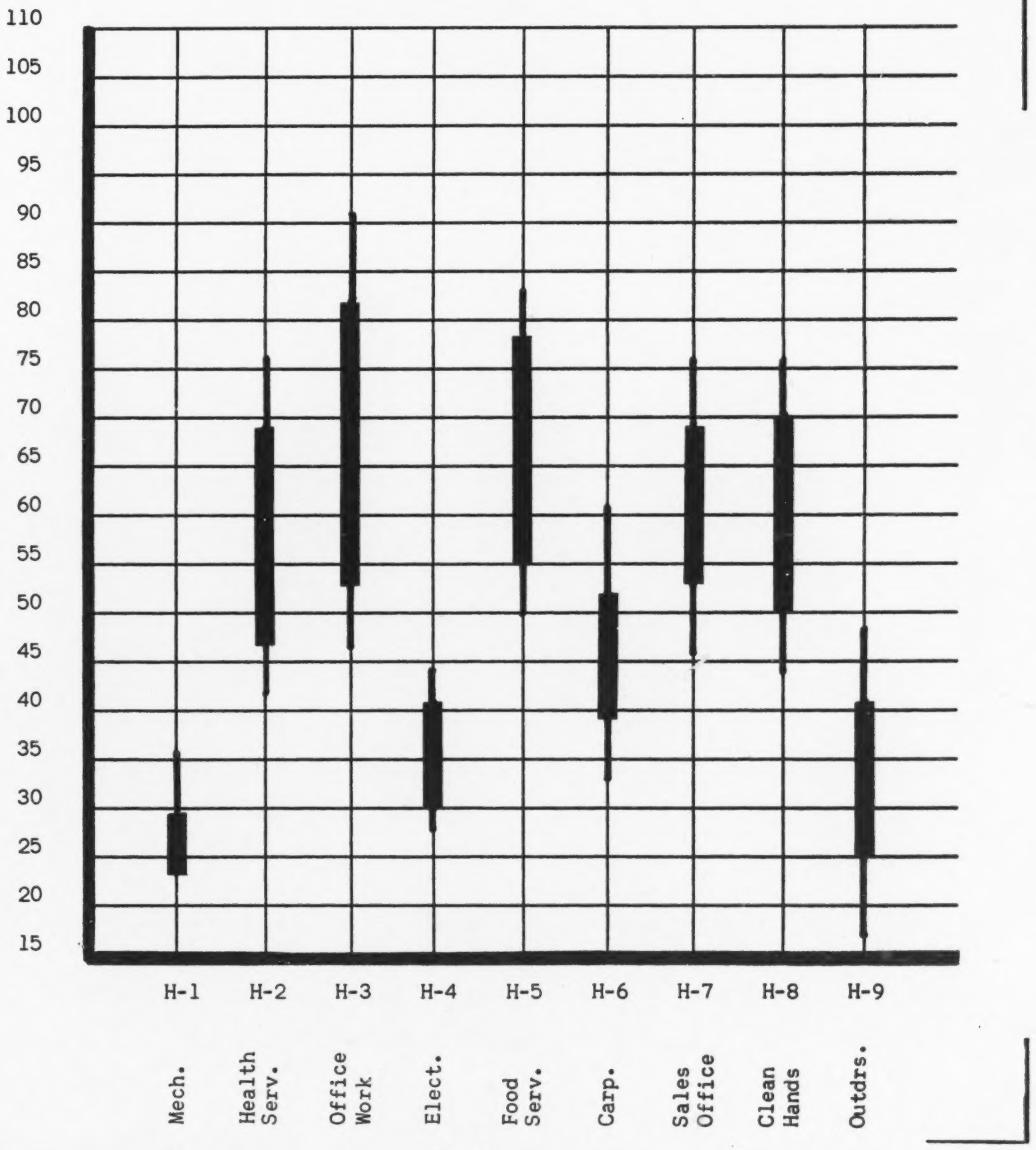
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
SALES



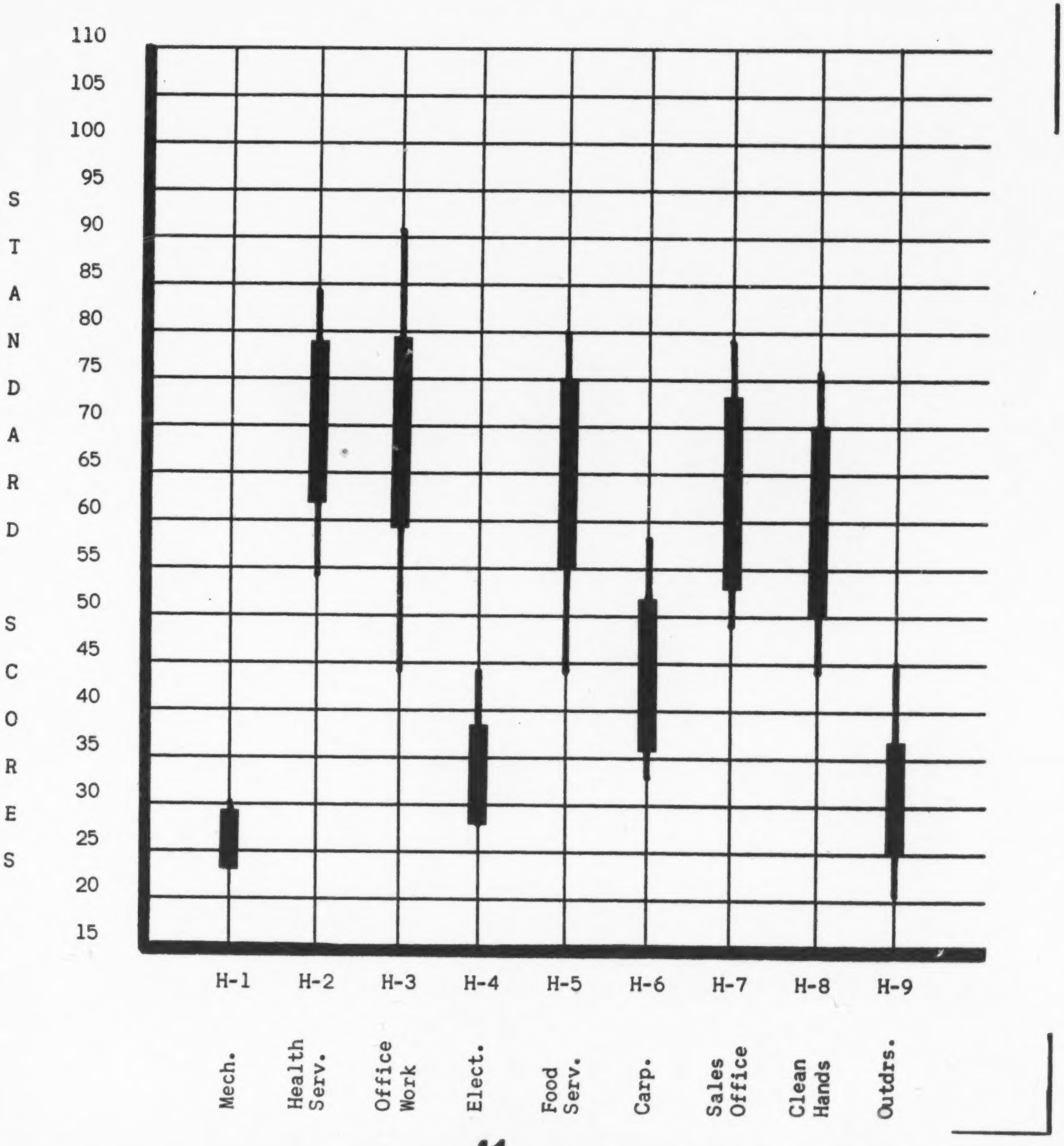
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
CLERICAL TRAINING



PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
COSMETOLOGY



PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
DENTAL ASSISTANT



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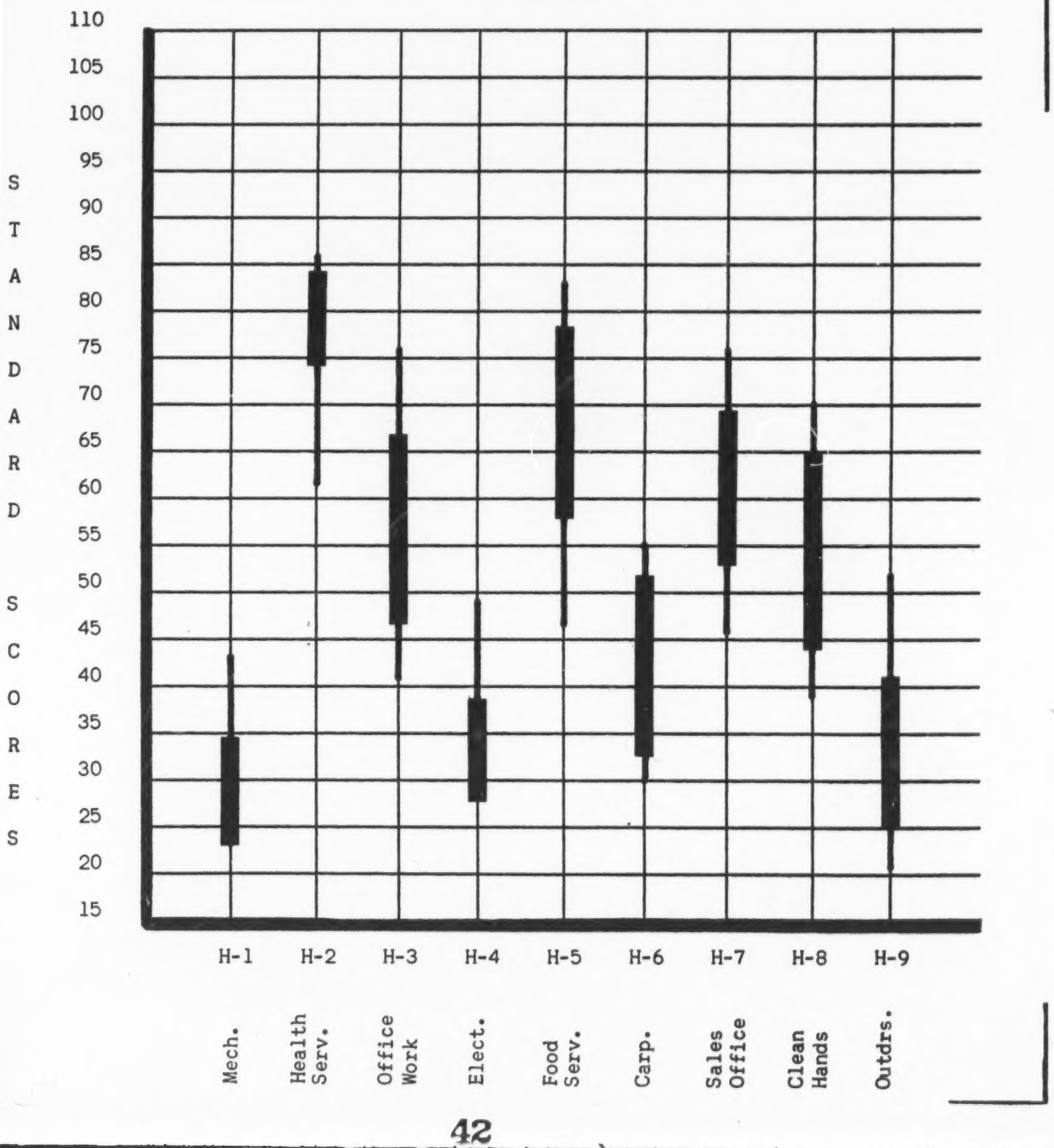
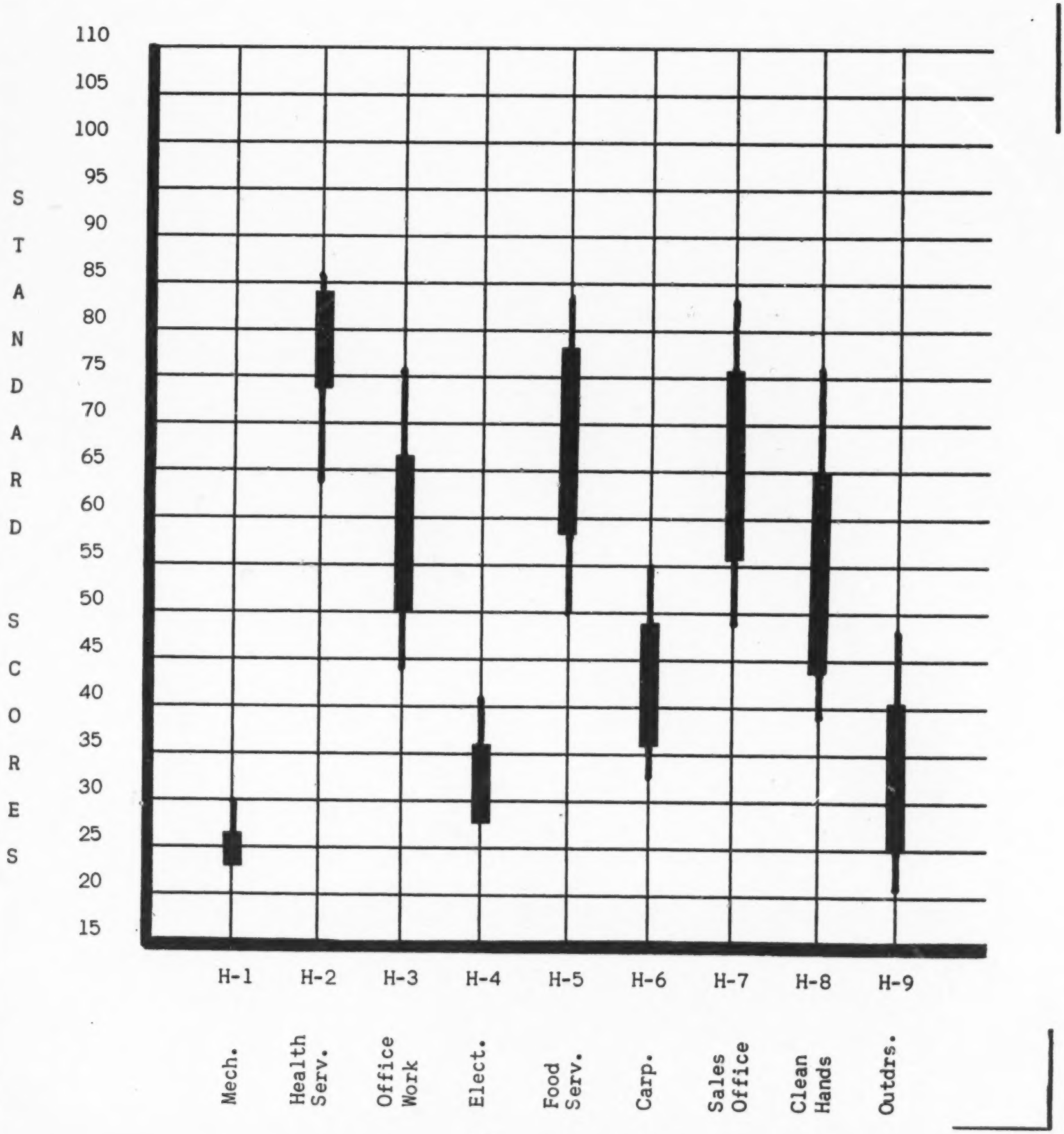
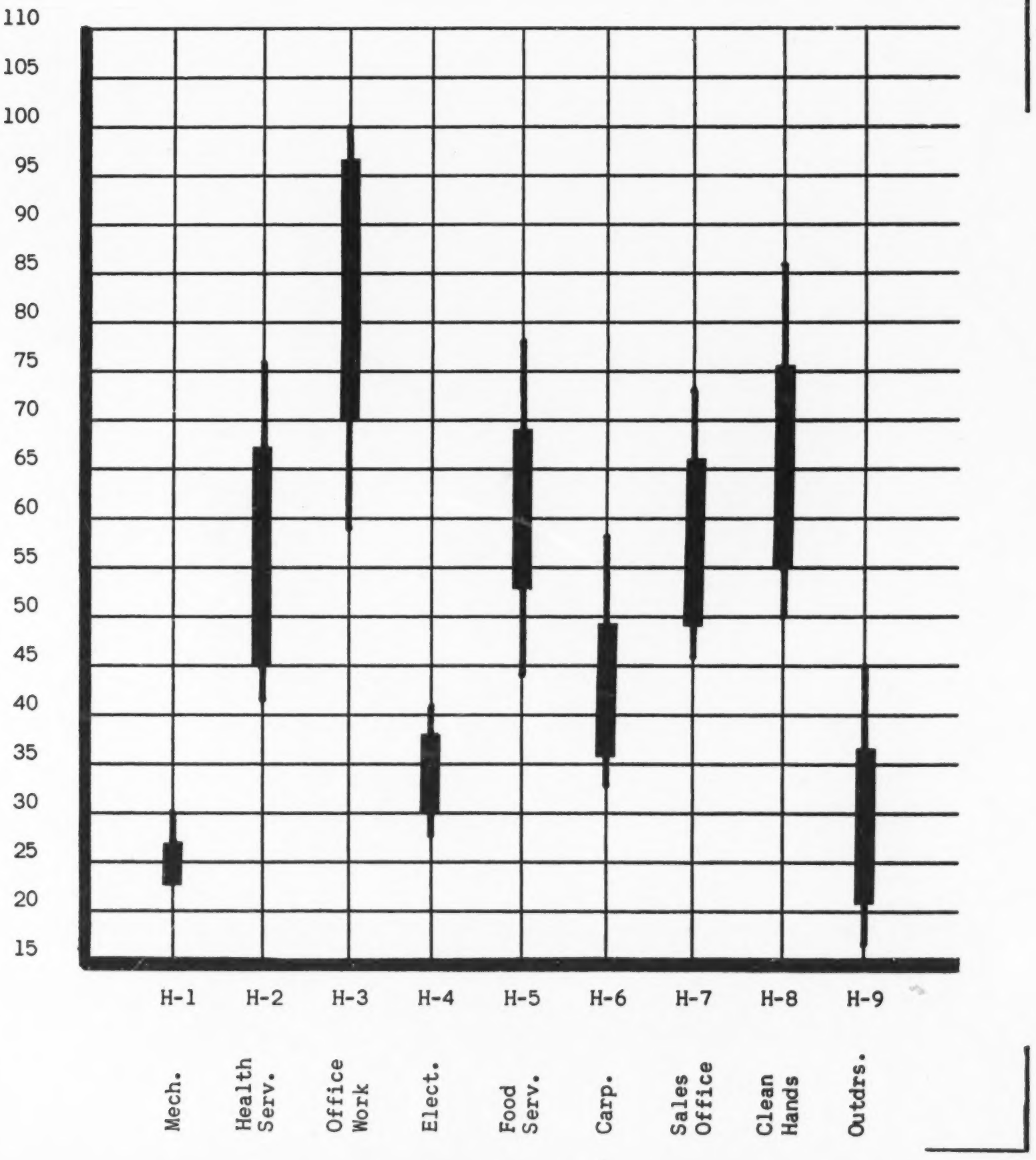
PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MEDICAL LABORATORY ASSISTANT



PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
PRACTICAL NURSING



PROJECT MINI-SCORE TRAINING SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
SECRETARIAL TRAINING



APPENDIX C

MVII HOMOGENEOUS KEY EMPLOYMENT SUCCESS NORM PROFILES

CLUSTER I

PRIMARILY MALE CURRICULA

Automotive 42
Carpentry 43
Electronics 44
Machine Shop 45
Mechanical Drafting and Design 46
Power and Home Electricity 47
Welding 48

CLUSTER II

CURRICULA WITH BOTH MALE AND FEMALE

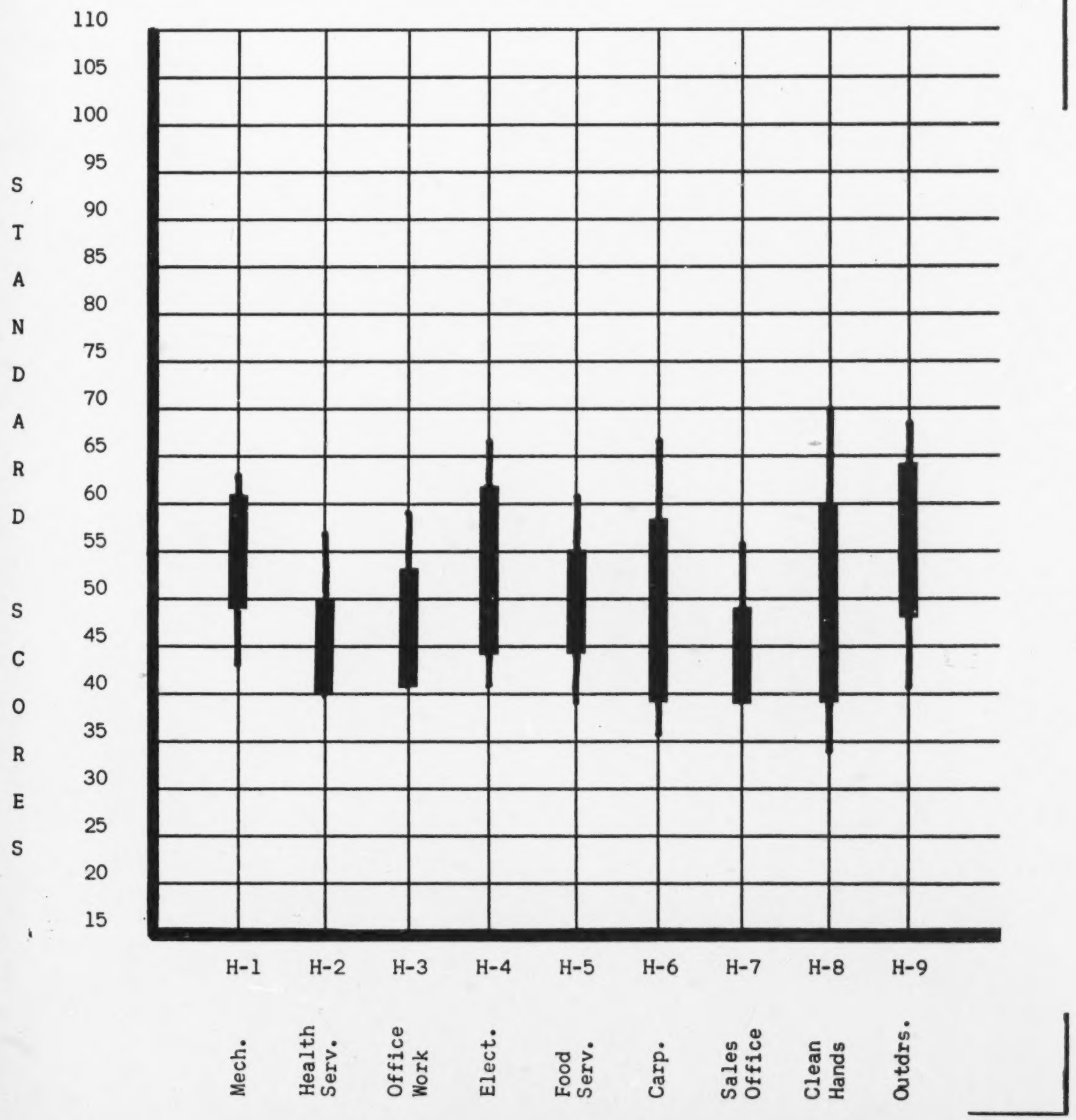
Accounting 49
Data Processing 50

CLUSTER III

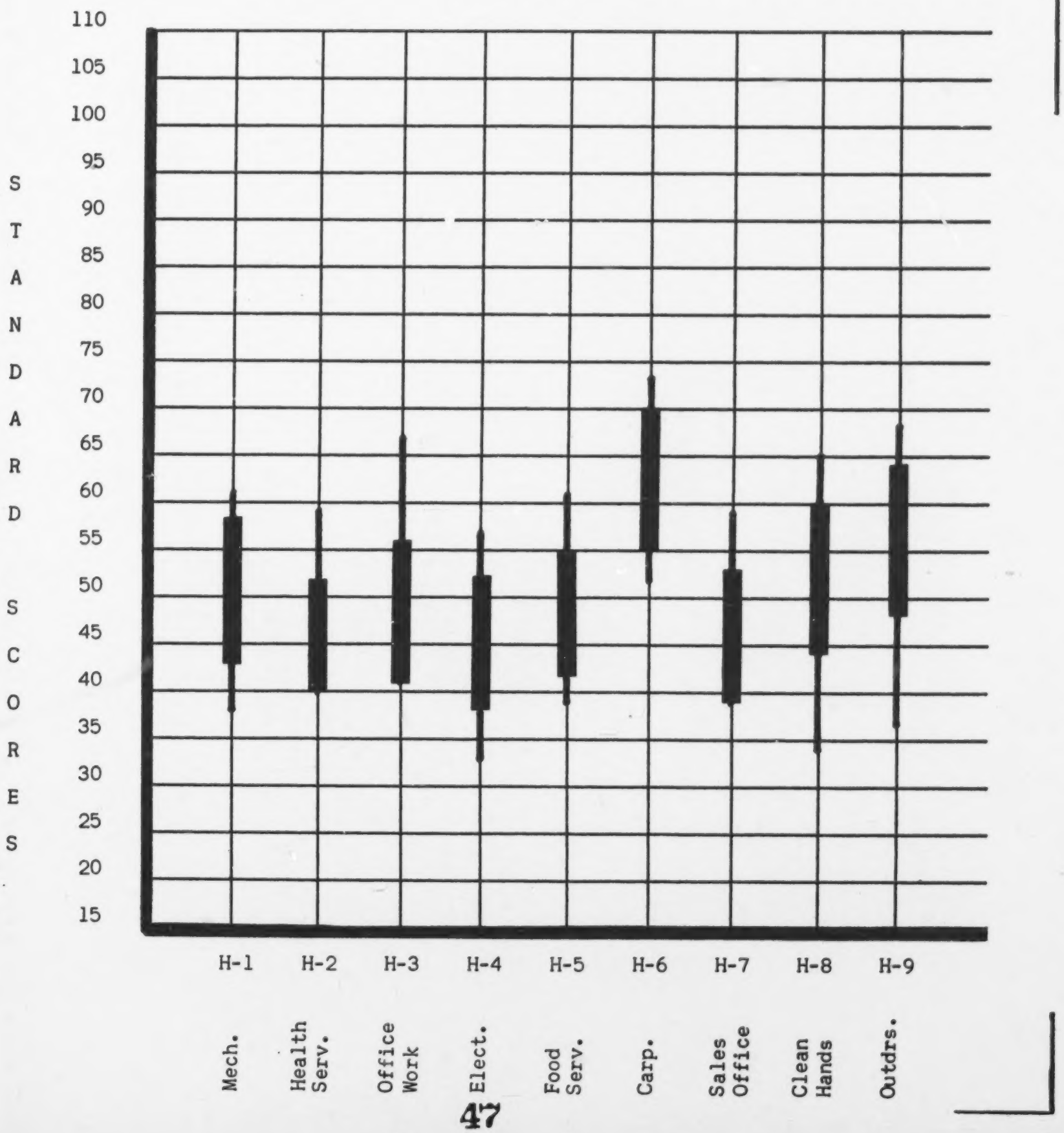
PRIMARILY FEMALE CURRICULA

Clerical Training 51
Cosmetology 52
Practical Nursing 53
Secretarial Training 54

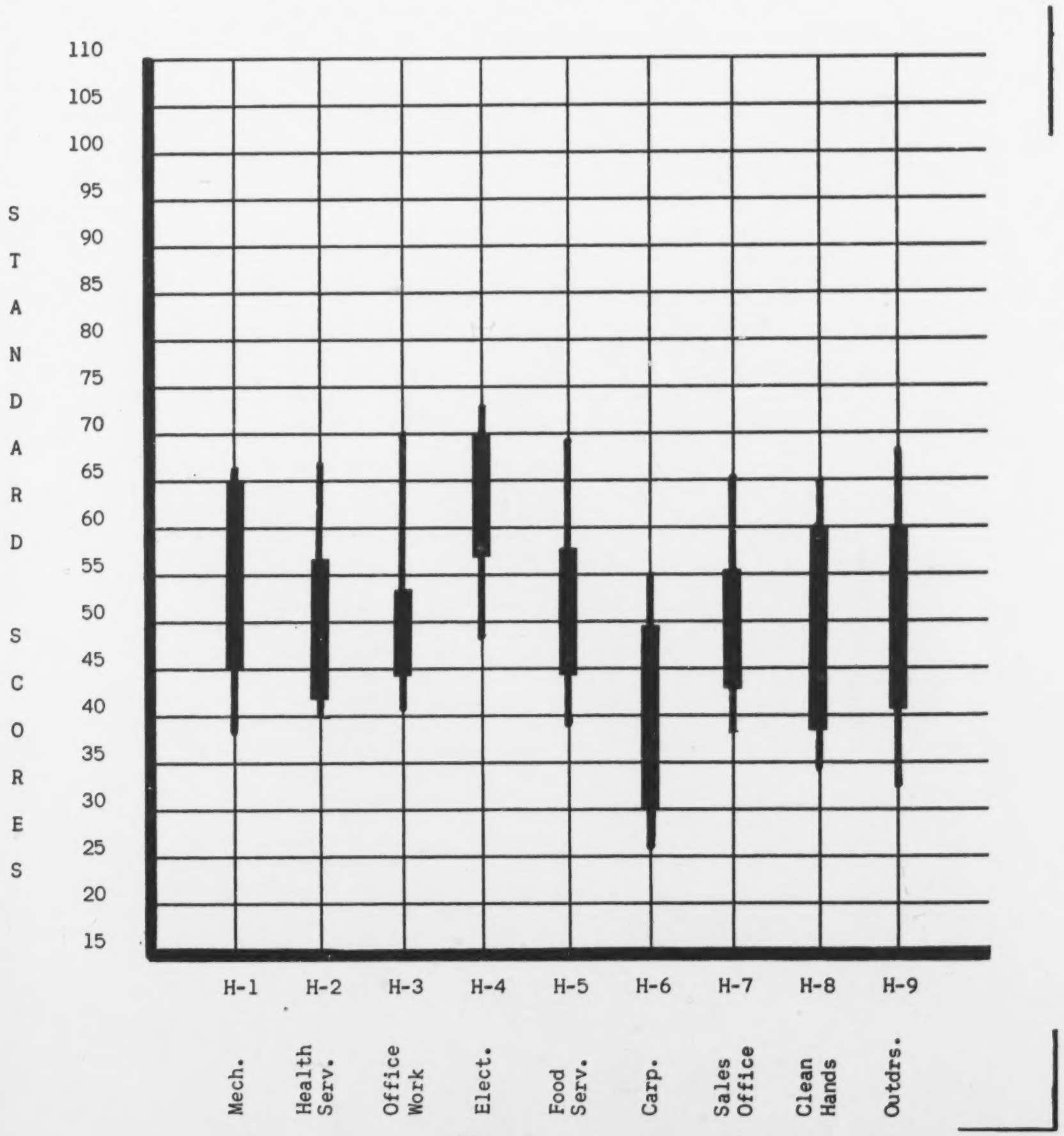
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
AUTOMOTIVE



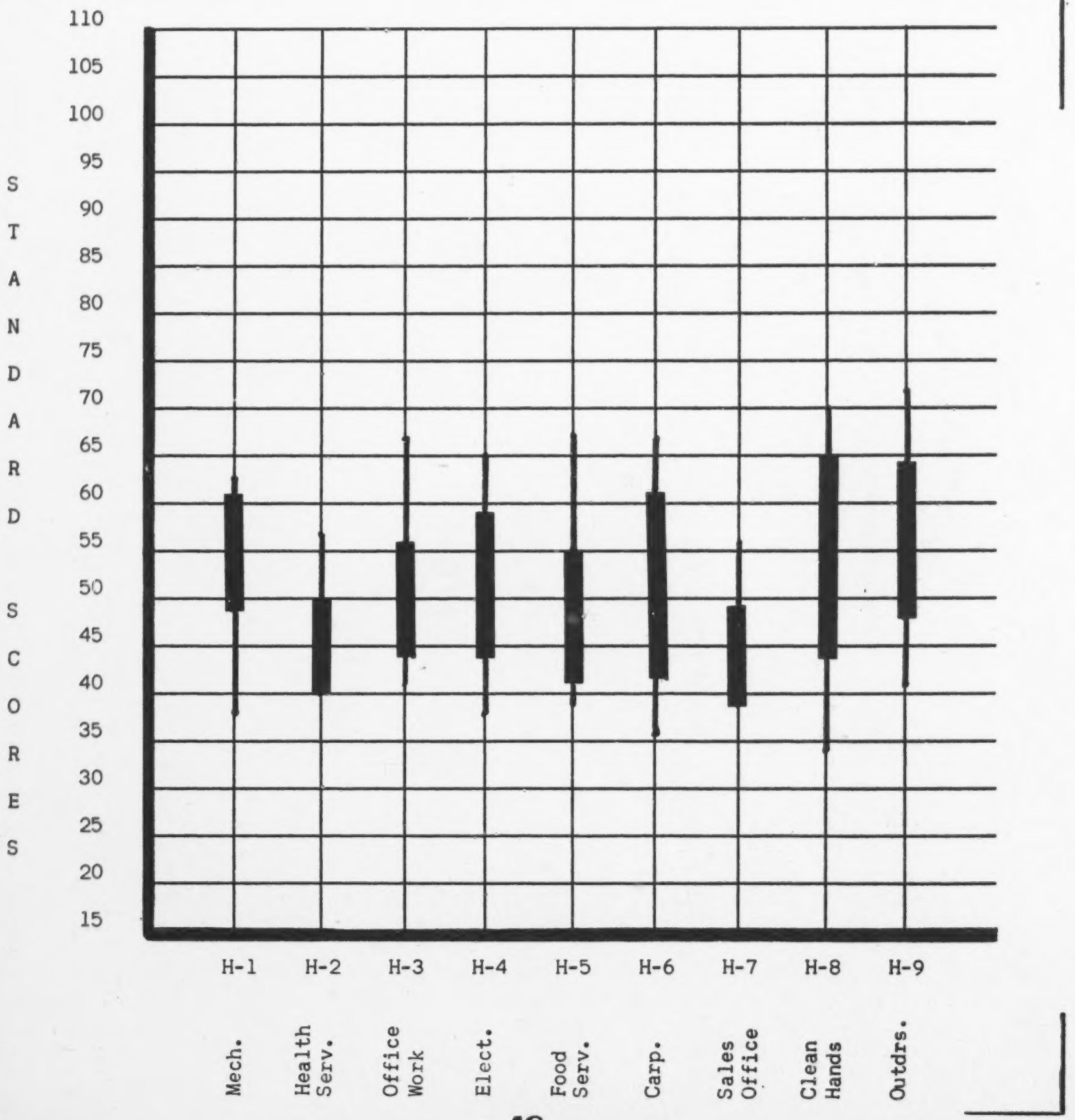
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
CARPENTRY



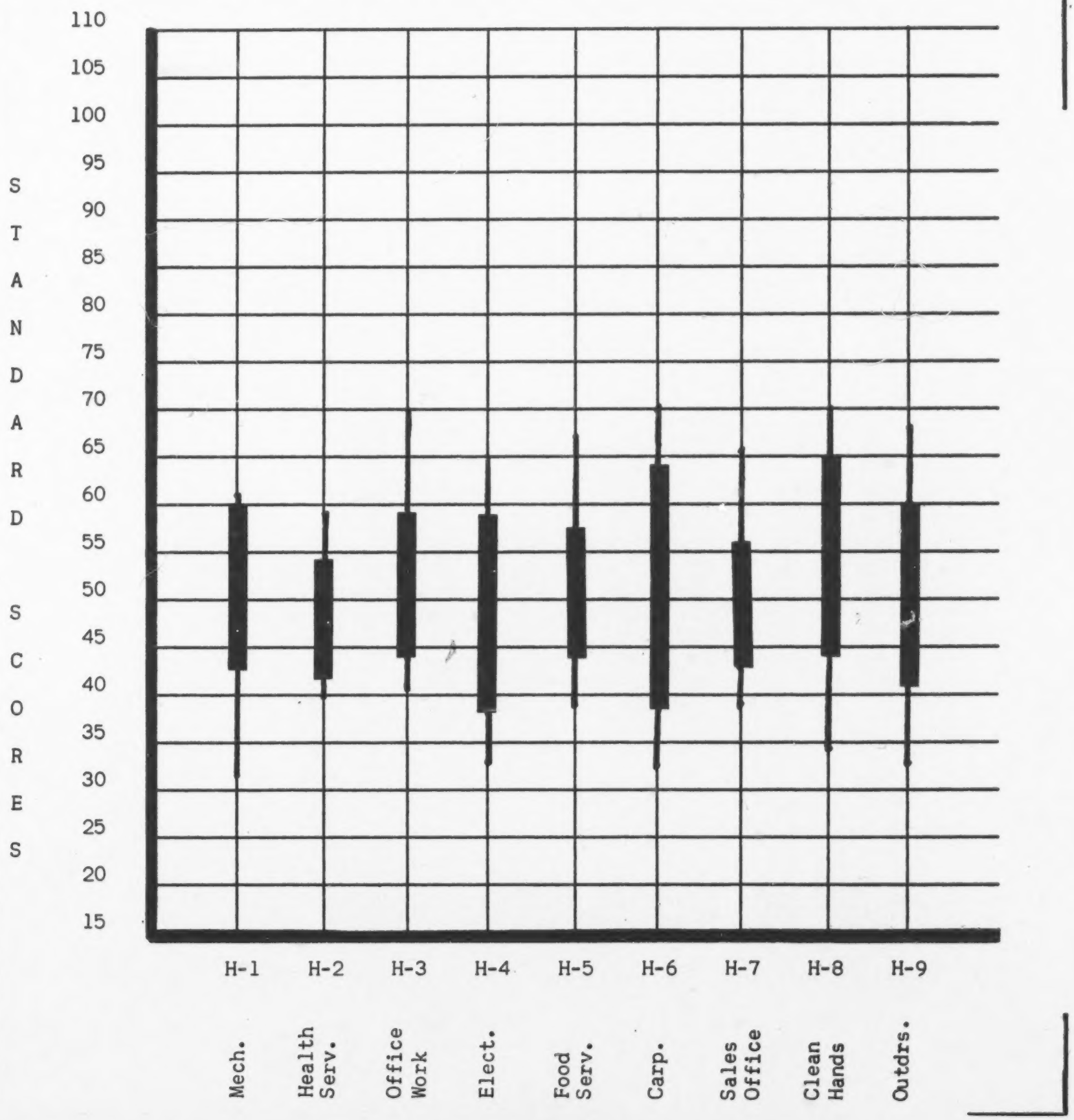
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
ELECTRONICS



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MACHINE SHOP



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
MECHANICAL DRAFTING AND DESIGN



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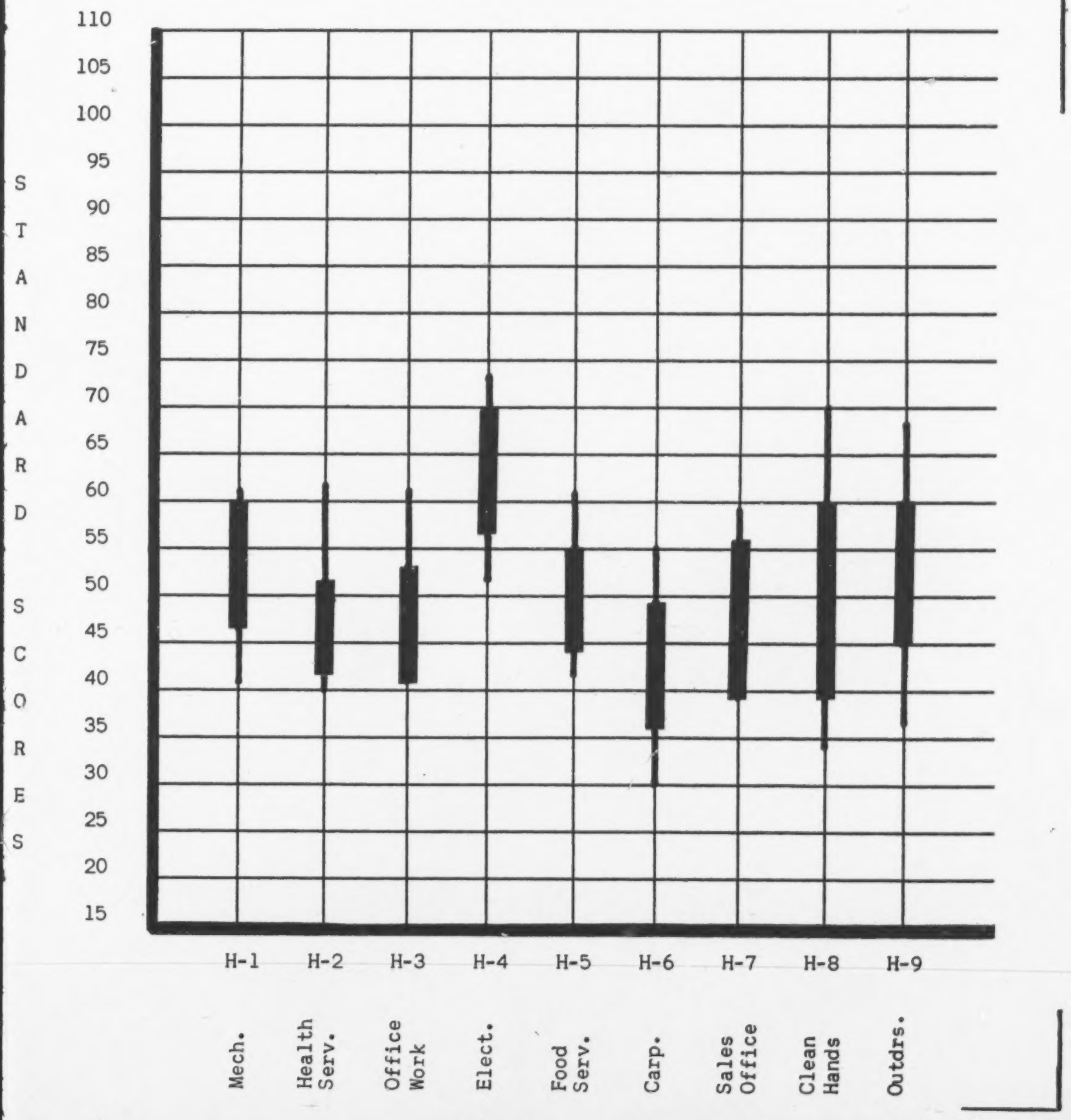
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
POWER AND HOME ELECTRICITY



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
WELDING

STANDARD SCORES

110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15

H-1 H-2 H-3 H-4 H-5 H-6 H-7 H-8 H-9

Mech.
Health Serv.
Office Work
Elect.
Food Serv.
Carp.
Sales Office
Clean Hands
Outdrs.

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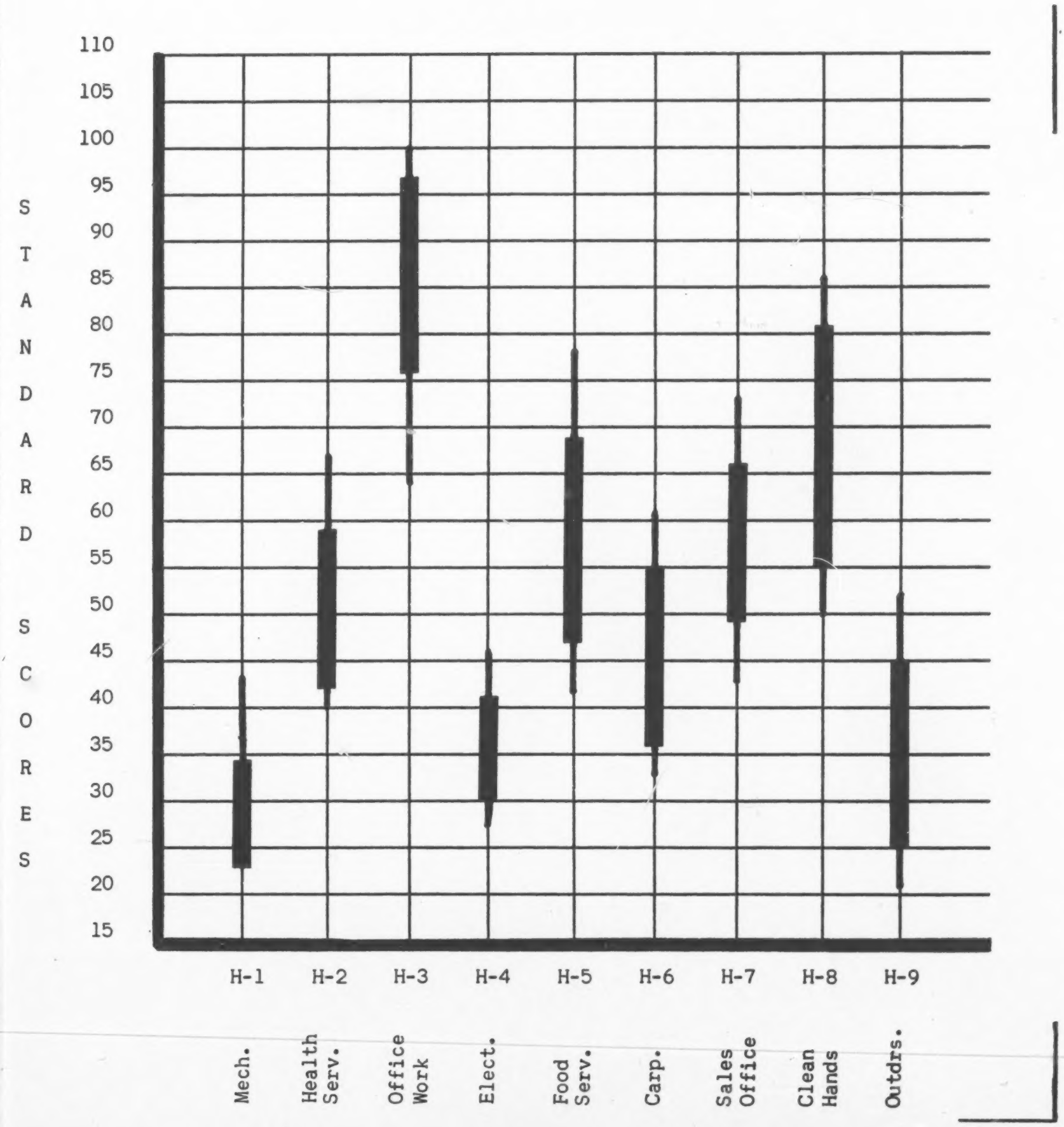
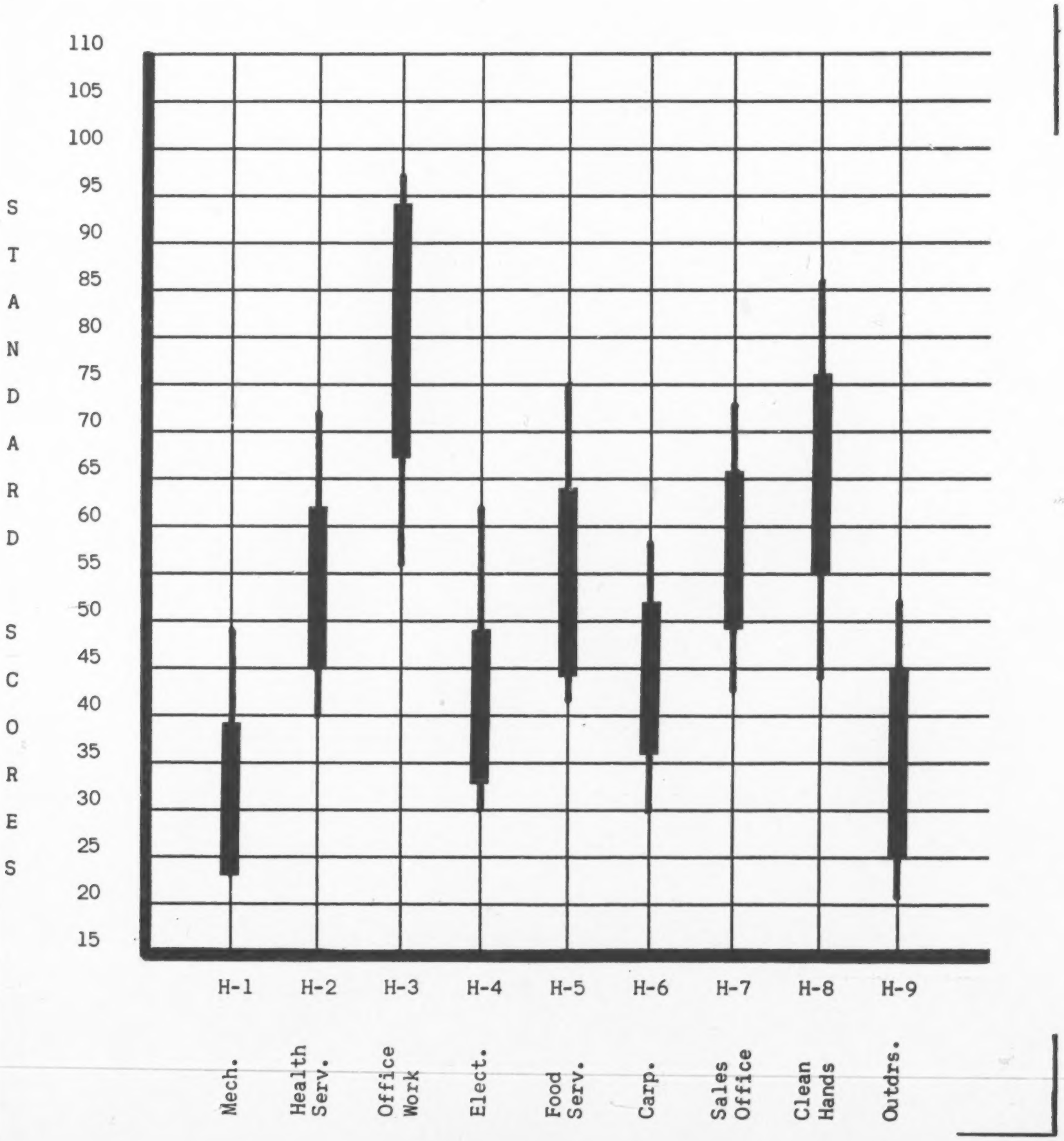
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
ACCOUNTING



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
DATA PROCESSING

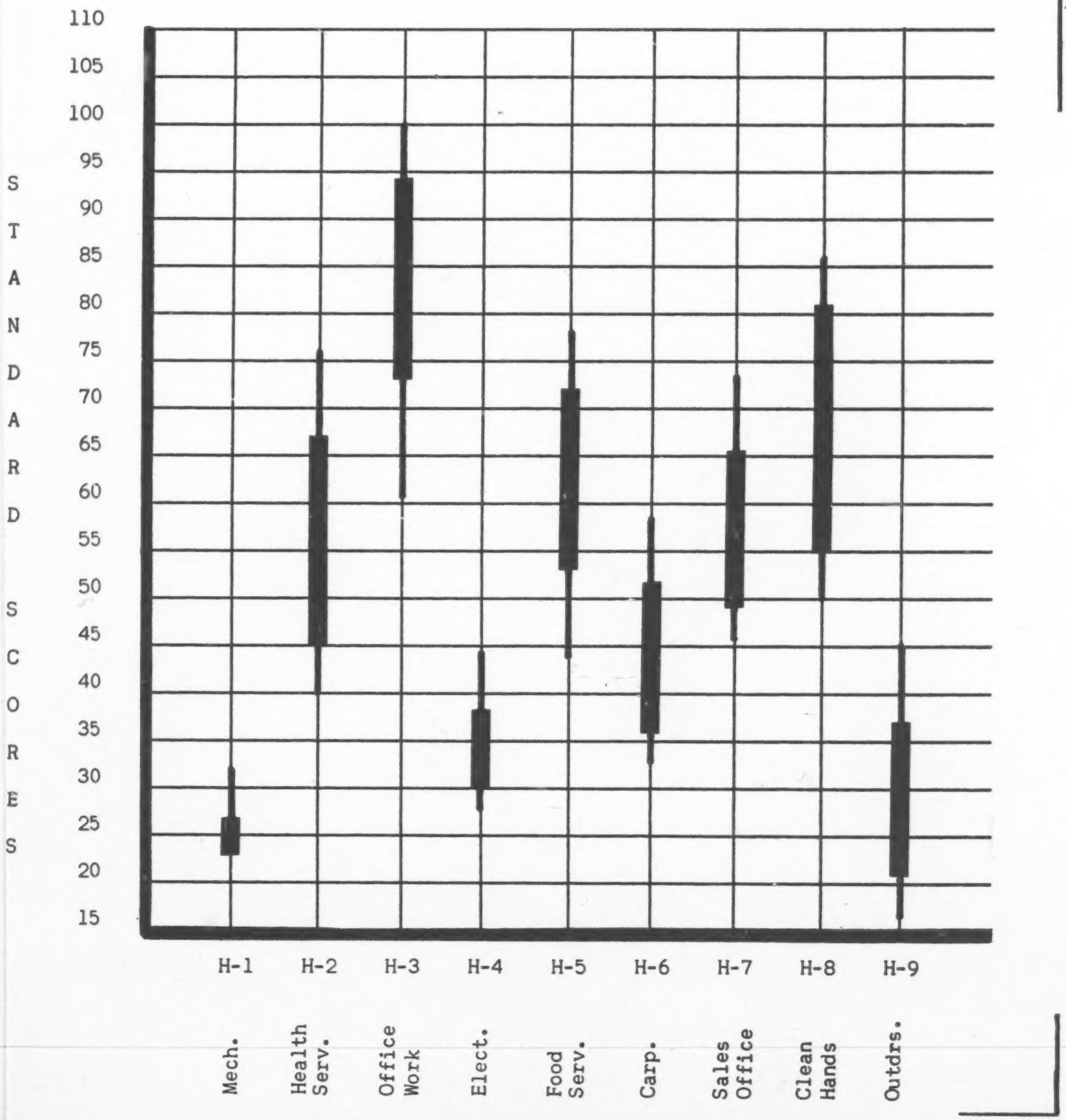


PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS

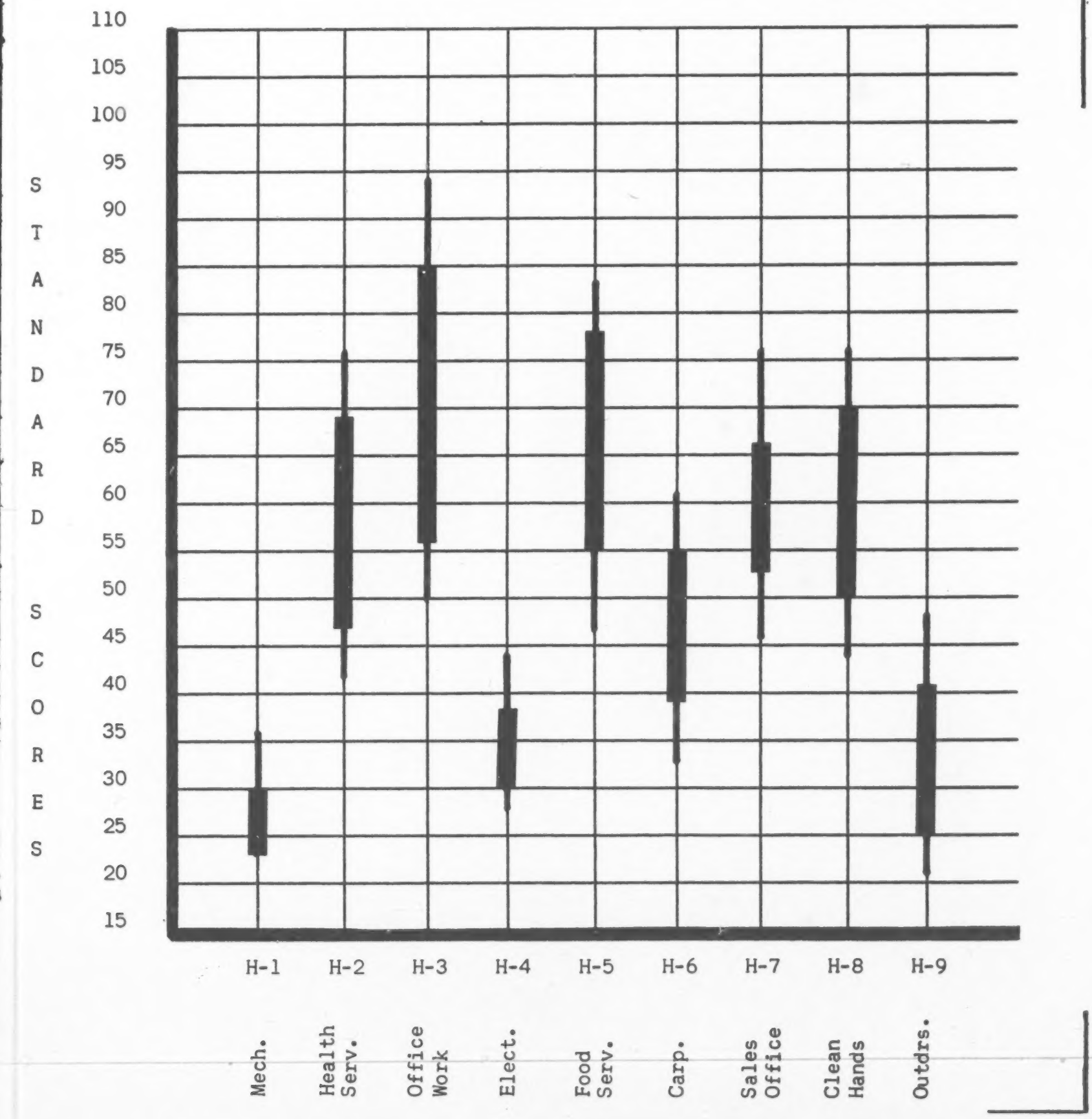
MVII - HOMOGENEOUS KEY

PROFILE SHEET

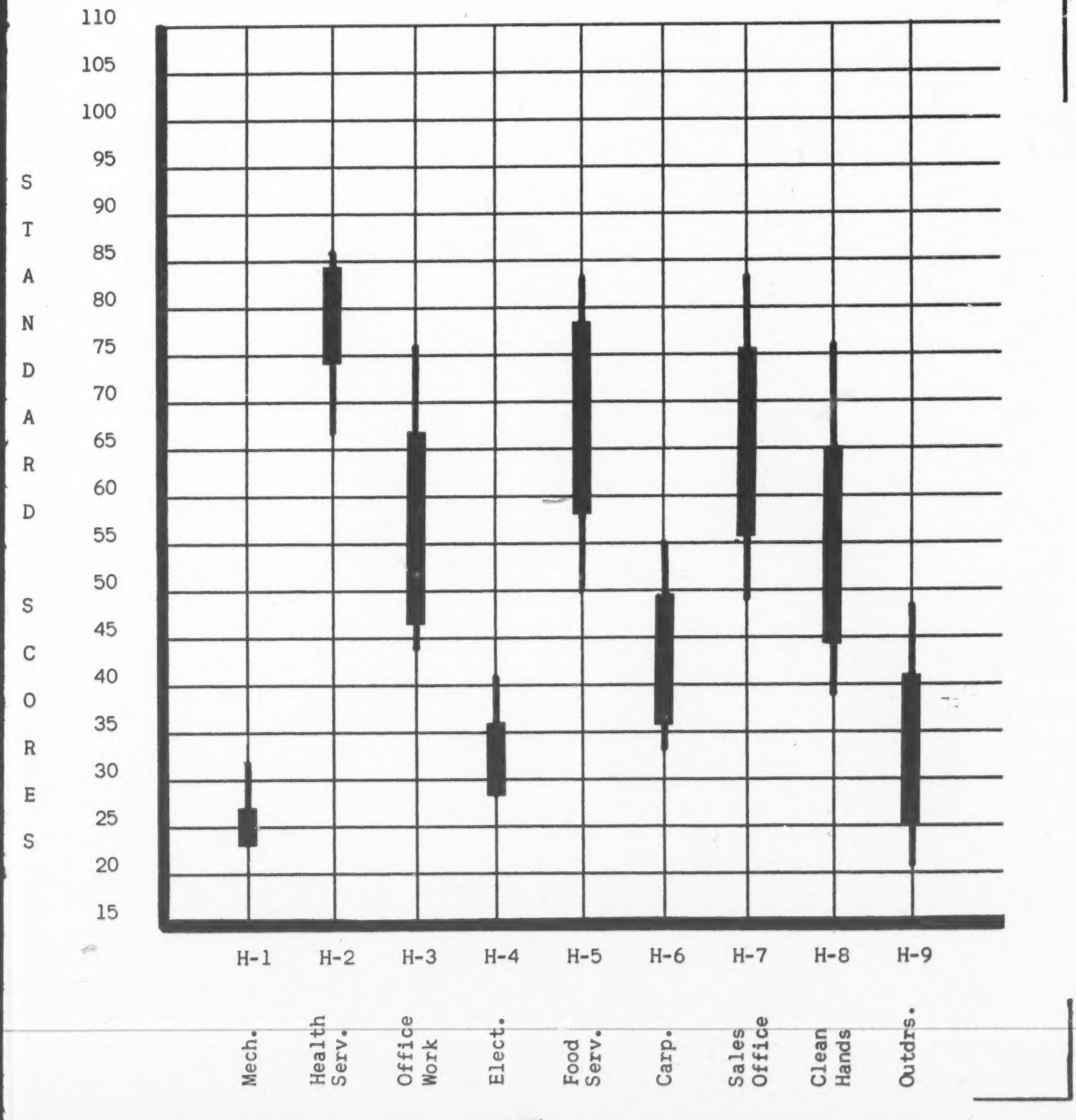
CLERICAL TRAINING



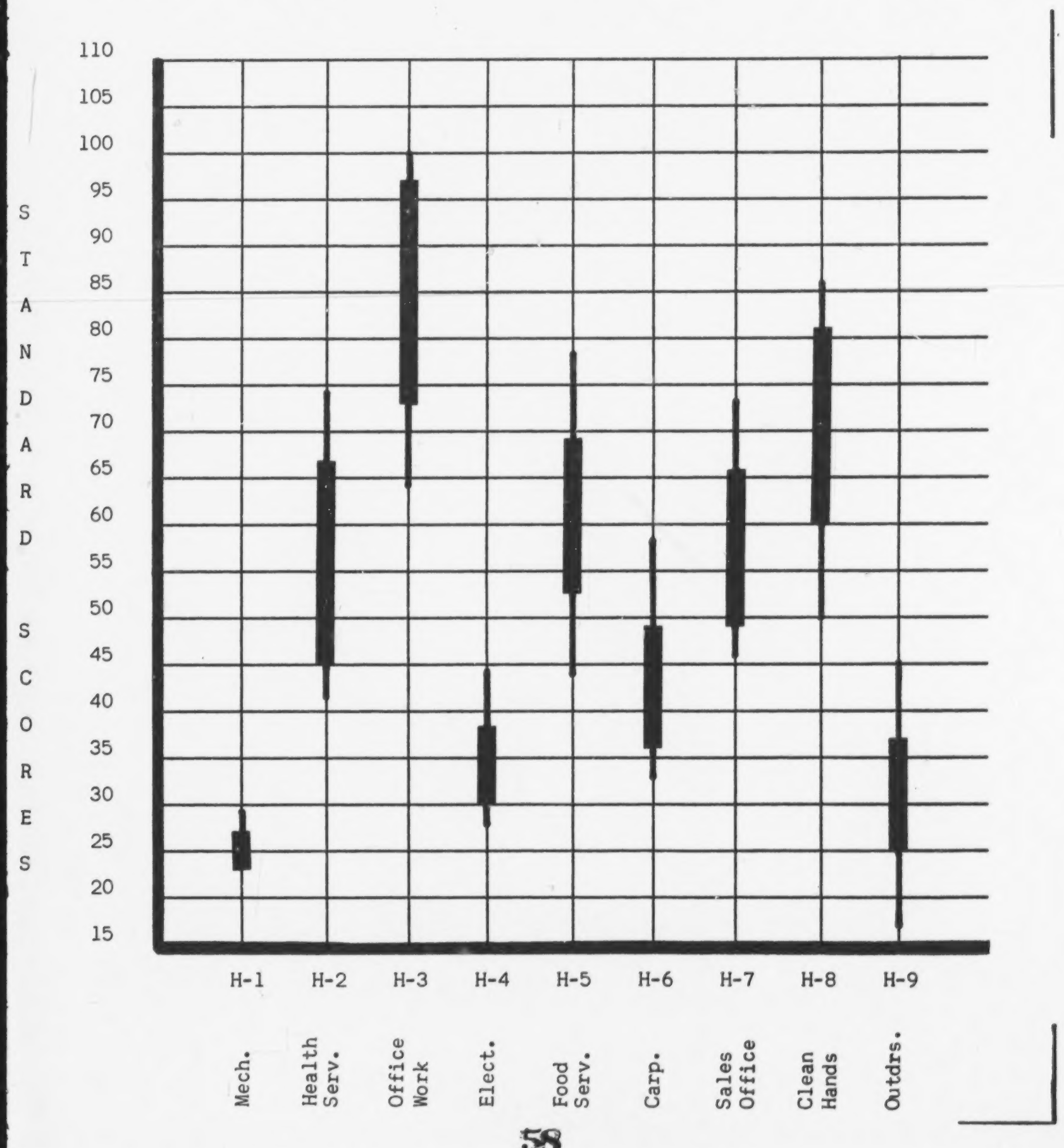
PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
COSMETOLOGY



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
PRACTICAL NURSING



PROJECT MINI-SCORE EMPLOYMENT SUCCESS NORMS
MVII - HOMOGENEOUS KEY
PROFILE SHEET
SECRETARIAL TRAINING



APPENDIX D

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS FOR GROUPS USED IN PREPARING TRAINING SUCCESS NORMS

PRIMARILY MALE CURRICULA 56

Agri-Technology
Aircraft Mechanics
Architectural Drafting
Automotive
Carpentry
Chefs and Cooks
Diesel Mechanics
Electronics
Farm Equipment Mechanics
Fluid Power Technology
Machine Shop
Mechanical Drafting and Design
Mechanical Refrigeration, Air Conditioning, and Appliance Repair
Plumbing and Sheet Metal
Power and Home Electricity
Printing and Graphic Arts
Welding

CURRICULA WITH BOTH MALE AND FEMALE 58

Accounting
Data Processing
Interior Design and Sales Assistant
Sales

PRIMARILY FEMALE CURRICULA 58

Clerical Training
Cosmetology
Dental Assistant
Medical Laboratory Assistant
Practical Nursing
Secretarial Training

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
TRAINING SUCCESS NORMS

CURRICULUM	N	H-1		H-2		H-3		H-4		H-5		H-6	
		$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
PRIMARILY MALE CURRICULA													
Agri-Technology	115	11.37	5.15	4.01	3.51	5.65	4.95	7.19	3.58	5.41	3.96	7.53	2.95
Aircraft Mechanics	103	18.24	3.05	3.13	2.42	1.41	1.55	10.58	2.86	4.09	2.41	6.14	3.19
Architectural Drafting	53	13.49	4.64	3.28	2.84	3.98	3.55	7.26	2.91	4.45	3.09	9.15	3.25
Automotive	495	17.12	3.75	2.23	2.02	2.20	2.36	9.67	3.25	4.19	2.74	7.18	2.97
Carpentry	181	14.99	4.26	2.60	2.58	3.09	3.10	6.75	2.81	3.71	2.90	11.31	2.69
Chefs and Cooks	61	6.82	5.34	5.66	4.20	5.33	4.12	5.33	3.76	15.46	3.66	6.97	2.78
Diesel Mechanics	69	17.78	3.86	2.59	2.89	1.93	2.16	9.58	3.29	4.17	3.10	7.42	3.09
Electronics	202	15.50	4.12	4.26	3.19	3.20	2.90	13.73	2.69	3.96	2.96	3.53	2.41
Farm Equipment Mechanics	72	16.90	3.93	2.14	2.75	2.44	1.99	9.64	3.31	4.26	2.87	7.47	3.05
Fluid Power Technology	51	16.63	3.58	3.49	2.81	2.71	2.75	9.75	2.60	3.67	2.31	6.63	2.63
Machine Shop	166	17.13	3.82	2.40	2.45	2.74	2.80	8.67	3.13	3.75	2.62	8.15	3.14
Mechanical Drafting and Design	251	14.66	4.56	3.32	2.88	3.23	3.00	7.69	3.50	4.59	2.86	8.06	3.22
Mech. Refrig., Air Cond., & Appl. Repair	56	14.80	4.92	3.41	2.80	3.18	2.53	10.29	3.48	4.39	3.10	6.05	3.01
Plumbing and Sheet Metal	49	15.27	4.68	2.76	3.18	2.88	2.93	8.80	3.55	3.82	2.74	7.65	2.72
Power and Home Electricity	207	16.57	4.01	3.12	2.92	2.38	2.28	12.94	2.93	4.18	2.96	5.16	2.56
Printing and Graphic Arts	80	10.69	4.91	4.50	3.41	5.09	4.17	7.24	3.63	5.15	3.69	6.76	3.23
Welding	254	15.89	4.60	2.86	2.64	2.56	2.73	8.21	3.36	4.35	3.07	7.59	3.08

$\bar{X}$ = Mean S = Standard Deviation N = Sample Size

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
TRAINING SUCCESS NORMS

CURRICULUM	N	H-7 $\bar{X}$	H-7 S	H-8 $\bar{X}$	H-8 S	H-9 $\bar{X}$	H-9 S
PRIMARILY MALE CURRICULA							
Agri-Technology	115	3.50	2.34	4.44	2.18	8.34	2.45
Aircraft Mechanics	103	2.49	2.11	2.33	1.65	9.09	1.95
Architectural Drafting	53	3.70	2.30	3.53	2.07	8.60	2.59
Automotive	495	1.89	1.83	3.06	1.81	9.75	2.21
Carpentry	181	2.20	2.10	3.59	1.78	9.73	2.28
Chefs and Cooks	61	5.00	3.08	4.36	2.19	5.49	2.23
Diesel Mechanics	69	1.77	2.04	2.62	1.77	9.90	1.95
Electronics	202	3.40	2.51	3.45	1.92	8.59	2.37
Farm Equipment Mechanics	72	2.11	1.97	3.37	1.86	9.85	2.19
Fluid Power Technology	51	2.12	2.14	3.20	1.99	9.78	2.00
Machine Shop	166	1.80	1.81	3.46	2.01	9.82	2.18
Mechanical Drafting and Design	251	3.52	2.49	3.71	1.84	8.56	2.36
Mech. Refrig., Air Cond., & Appl Repair	56	2.91	2.46	3.86	2.22	8.80	2.50
Plumbing and Sheet Metal	49	2.73	2.17	3.02	1.77	9.55	2.50
Power and Home Electricity	207	2.40	1.91	3.18	1.94	9.28	2.30
Printing and Graphic Arts	80	4.70	2.86	4.56	2.09	6.39	2.58
Welding	254	2.34	1.97	3.35	2.01	9.36	2.41

$\bar{X}$ = Mean S = Standard Deviation N = Sample Size

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
TRAINING SUCCESS NORMS

CURRICULUM	N	H-1 $\bar{X}$	H-1 S	H-2 $\bar{X}$	H-2 S	H-3 $\bar{X}$	H-3 S	H-4 $\bar{X}$	H-4 S	H-5 $\bar{X}$	H-5 S	H-6 $\bar{X}$	H-6 S
CURRICULA WITH BOTH MALE AND FEMALE													
Accounting	398	3.82	4.22	3.99	3.55	14.96	3.93	3.72	2.92	6.25	4.12	6.24	2.61
Data Processing	157	4.65	4.76	5.34	3.79	12.77	4.68	4.84	3.50	5.92	3.48	6.05	2.71
Interior Design & Sales Assistant	54	4.85	4.77	5.76	4.23	6.46	5.00	3.89	3.20	7.43	3.42	7.74	2.84
Sales	108	5.29	4.86	4.47	3.25	9.59	4.81	4.72	3.30	6.00	3.69	6.36	2.64
PRIMARILY FEMALE CURRICULA													
Clerical Training	551	1.30	2.09	6.27	4.23	14.16	3.95	2.87	1.89	8.41	3.24	5.45	2.21
Cosmetology	249	1.94	2.94	7.91	4.18	9.45	4.58	2.81	1.98	10.21	3.78	6.16	2.35
Dental Assistant	52	1.15	1.77	12.15	3.63	9.37	3.97	2.12	1.92	9.29	3.61	5.44	2.14
Medical Lab Assistant	49	2.73	4.08	16.02	3.96	5.20	3.38	2.51	2.43	10.04	3.75	4.94	2.47
Practical Nursing	509	.99	1.52	15.75	2.52	5.91	3.31	1.61	1.44	10.39	3.38	5.11	2.11
Secretarial Training	739	.84	1.87	6.71	4.35	14.49	4.14	2.52	1.75	7.93	3.23	5.34	2.24

$\bar{X}$ = Mean S = Standard Deviation N = Sample Size

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
TRAINING SUCCESS NORMS

CURRICULUM	N	H-7 $\overline{X}$	H-7 S	H-8 $\overline{X}$	H-8 S	H-9 $\overline{X}$	H-9 S
CURRICULA WITH BOTH MALE AND FEMALE							
Accounting	398	5.05	2.63	6.55	2.16	4.70	2.43
Data Processing Processing	157	5.39	2.48	6.18	2.42	4.83	2.48
Interior Design & Sales Assistant	54	7.50	2.90	4.43	1.81	4.35	1.42
Sales	108	6.45	3.01	5.68	2.07	5.58	2.74
PRIMARILY FEMALE CURRICULA							
Clerical Training	551	5.82	2.51	6.48	2.03	3.46	1.93
Cosmetology	249	6.42	2.65	5.24	1.89	3.71	2.09
Dental Assistant	52	7.27	2.65	5.33	1.77	3.58	1.60
Medical Lab Assistant	49	6.78	2.69	3.78	1.75	3.92	2.30
Practical Nursing	509	8.13	2.78	4.40	1.80	3.97	1.91
Secretarial Training	739	5.95	2.44	6.33	1.91	3.31	1.80

$\overline{X}$ = Mean S = Standard Deviation N = Sample Size

APPENDIX E

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS FOR GROUPS USED IN PREPARING EMPLOYMENT SUCCESS NORMS

PRIMARILY MALE CURRICULA 61

Automotive
Carpentry
Electronics
Machine Shop
Mechanical Drafting and Design
Power and Home Electricity
Welding

CURRICULA WITH BOTH MALE AND FEMALE 61

Accounting
Data Processing

PRIMARILY FEMALE CURRICULA 61

Clerical Training
Cosmetology
Practical Nursing
Secretarial Training

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
EMPLOYMENT SUCCESS NORMS

CURRICULUM	N	H-1		H-2		H-3		H-4		H-5		H-6	
		$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
PRIMARILY MALE CURRICULA													
Automotive	130	17.64	3.14	2.35	2.13	2.27	2.18	9.58	3.09	3.94	2.26	7.18	2.91
Carpentry	64	15.52	3.66	2.39	2.63	2.70	2.59	6.70	2.39	3.22	2.47	11.48	2.34
Electronics	51	16.18	3.93	4.10	3.63	2.75	2.57	13.27	2.90	4.08	2.97	3.98	2.68
Machine Shop	68	17.04	3.88	2.32	2.11	3.09	3.30	8.75	2.93	3.68	2.93	8.15	3.04
Mechanical Drafting & Design	82	15.10	4.63	3.20	2.56	3.37	3.17	7.63	3.49	4.45	3.04	8.13	3.41
Power and Home Electricity	87	16.53	3.81	3.05	3.05	2.32	2.34	13.08	2.32	3.87	2.50	4.99	2.03
Welding	51	16.55	3.74	2.63	2.23	2.43	2.76	8.22	2.86	4.06	2.55	8.20	3.00
CURRICULA WITH BOTH MALE AND FEMALE													
Accounting	162	2.70	3.56	4.44	3.60	15.25	3.85	3.14	2.26	7.35	4.14	6.02	2.63
Data Processing	65	4.03	4.54	5.72	3.58	13.45	4.23	4.83	3.57	6.14	3.65	5.68	2.51
PRIMARILY FEMALE CURRICULA													
Clerical Training	331	1.16	1.82	6.32	4.39	14.36	3.76	2.75	1.72	8.29	3.28	5.57	2.26
Cosmetology	103	1.99	2.89	7.68	4.16	9.87	4.49	2.68	1.87	10.02	3.82	6.28	2.59
Practical Nursing	334	1.03	1.59	15.84	2.40	5.86	3.31	1.57	1.41	10.27	3.46	5.19	2.14
Secretarial Training	480	.81	1.83	6.38	4.15	14.86	3.85	2.52	1.73	7.78	3.26	5.31	2.24

$\bar{X}$ = Mean S = Standard Deviation N = Sample Size

RAW SCORE HOMOGENEOUS KEY MEANS, STANDARD DEVIATIONS AND NUMBER OF OBSERVATIONS
EMPLOYMENT SUCCESS NORMS

CURRICULUM	N	H-7 $\bar{X}$	H-7 S	H-8 $\bar{X}$	H-8 S	H-9 $\bar{X}$	H-9 S
PRIMARILY MALE CURRICULA							
Automotive	130	1.64	1.62	3.17	1.81	9.89	2.16
Carpentry	64	2.05	1.97	3.48	1.71	9.83	2.17
Electronics	51	3.10	2.13	2.92	1.67	8.88	2.41
Machine Shop	68	1.78	1.62	3.54	2.04	9.79	2.15
Mechanical Drafting & Design	82	3.23	2.28	3.62	1.88	8.52	2.59
Power and Home Electricity	87	2.44	1.98	3.20	2.01	9.17	2.20
Welding	51	1.98	1.69	3.51	1.89	9.63	2.23
CURRICULA WITH BOTH MALE AND FEMALE							
Accounting	162	5.21	2.53	6.44	2.06	4.22	2.23
Data Processing	65	5.85	2.51	5.94	2.12	4.38	2.23
PRIMARILY FEMALE CURRICULA							
Clerical Training	331	5.80	2.42	6.50	2.07	3.45	1.90
Cosmetology	103	6.05	2.54	5.26	1.76	3.94	2.13
Practical Nursing	334	8.15	2.71	4.38	1.88	4.04	1.95
Secretarial Training	480	5.86	2.40	6.49	1.95	3.35	1.79

$\bar{X}$ = Mean S = Standard Deviation N = Sample Size

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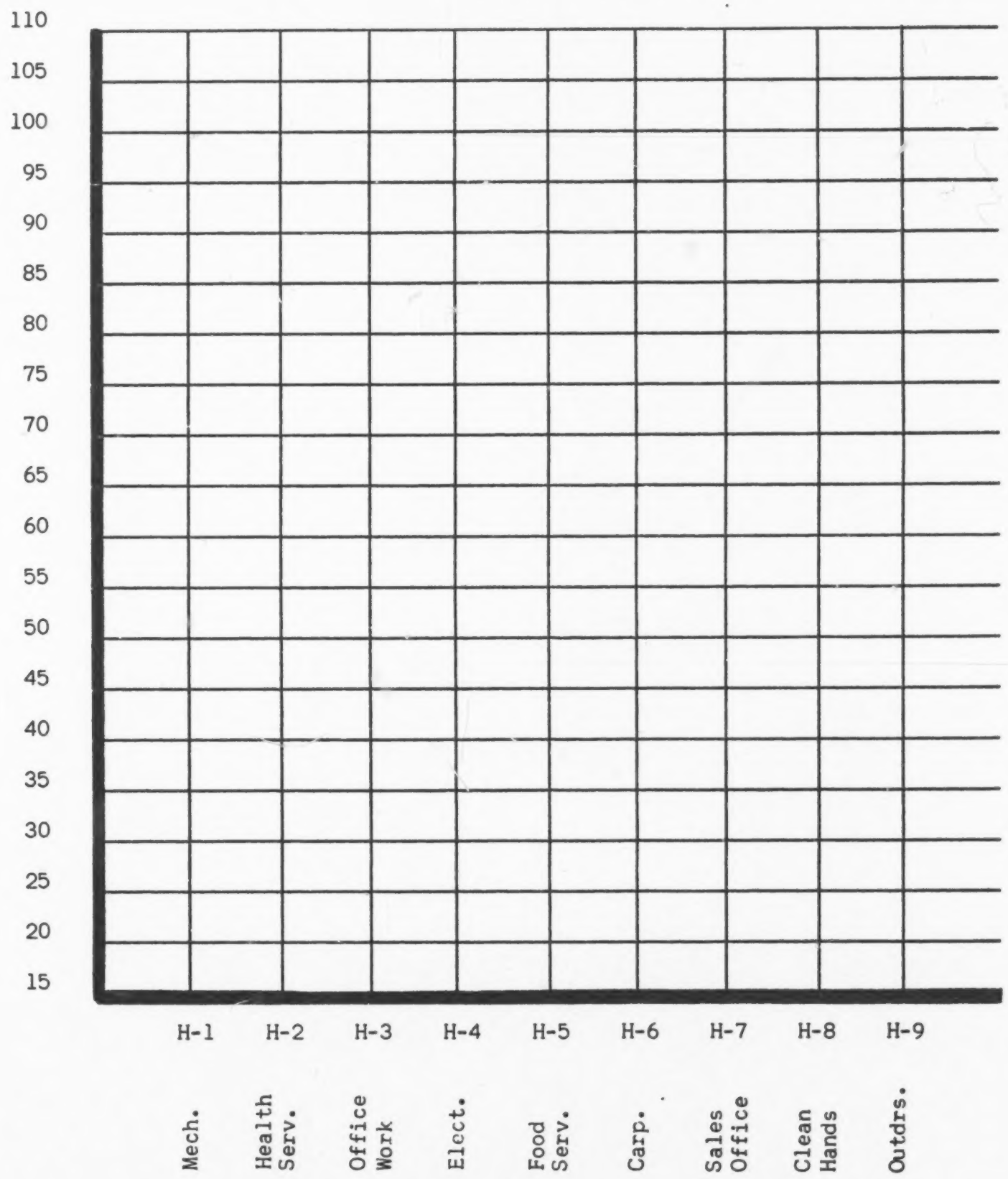
MVII - HOMOGENEOUS KEY
STUDENT PROFILE SHEET

NAME _____ DATE _____

CURRICULUM APPLYING FOR _____



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VOLUMES OF PROJECT-MINI SCORE* FINAL REPORT

PROJECT MINI-SCORE FINAL REPORT

PROJECT MINI-SCORE FINAL TECHNICAL REPORTS:

Report One - The Ability of Standardized Test Instruments to Predict Training Success and Employment Success

Report Two - The Ability of Standardized Test Instruments to Differentiate Membership in Different Vocational-Technical Curricula

Report Three - General Aptitude Test Battery
Training Success Norms and Employment Success Norms

Report Four - Minnesota Vocational Interest Inventory
Training Success Norms and Employment Success Norms

Report Five - Minnesota Scholastic Aptitude Test and Vocational Development Inventory
Training Success Norms and Employment Success Norms

*The project was commonly known as Project MINI-SCORE (Minnesota Student Characteristics and Occupational Related Education) but was originally proposed with the formal title: Characteristics of Full-Time Students in Post-Secondary Trade Courses; U.S.O.E. project number HRD 5-0148.